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August 28, 2009

British Columbia Utilities Commission 6th Floor, 900 Howe Street Vancouver, BC V6Z 2N3

Attention: Ms. Erica M. Hamilton, Commission Secretary

Dear Ms. Hamilton:

Re: Terasen Gas Inc. ("Terasen Gas", "Terasen", "TGI" or the "Company")

Customer Care Enhancement Project Application for a Certificate of Public Convenience and Necessity ("CPCN") to Insource Customer Care Services and Implement a New Customer Information System ("CIS")

Amended Application

On June 2, 2009, Terasen Gas applied to the British Columbia Utilities Commission (the "BCUC" or the "Commission") pursuant to section 45 of the *Utilities Commission Act*, R.S.B.C. 1996, Chapter 473, for a CPCN for the implementation of a new Customer Information System ("CIS") and for insourcing core elements of customer care services as detailed in the Application (the "Customer Care Enhancement Project" or the "Project"). This Application is undertaken to address changes in Terasen Gas' business needs as a result of the evolution of the energy marketplace, changing customer expectations regarding customer service, to reflect improvements in prevailing industry standards, and to ensure that Terasen Gas is able to sustain customer service best practices on an ongoing basis. Enclosed with this letter is an Amended Application, the contents of which are described in the second section of this cover letter.

Application Background

In 2002, the Company was an early adopter of a comprehensive Business Process Outsourcing model for customer care delivery through a Client Services Agreement with CustomerWorks LP. The arrangement afforded a number of benefits for customers and the Company. This Project responds to subsequent developments in Terasen Gas' operating environment, and takes advantage of advances in "commercial off the shelf" CIS platforms that provide greater functionality than the legacy system. The outsourcing industry has also evolved since 2002, with many early adopters of Business Process Outsourcing like Terasen



Gas transitioning to Strategic Sourcing models involving the optimal mix of insourcing and outsourcing for their particular organization. This Project will implement a Strategic Sourcing model for TGI's customer care delivery effective January, 2012. The Project can be implemented as a scope change within the parameters imposed by the existing Client Services Agreement with CustomerWorks LP.

Commission Order No. G-29-02, which approved Terasen Gas' Client Services Agreement with CustomerWorks LP, required that "Any significant improvement initiatives or scope changes pursuant to the Client Services Agreement are to be submitted to the Commission for review." Since implementing the Project will have a consequent impact on the scope of the customer care services that will remain to be provided by CustomerWorks LP under the Client Services Agreement it is appropriate and convenient that this improvement initiative and scope change to the Client Services Agreement be approved at the same time as part of the relief sought in this Application.

Contents of the Amended Application

In the June 2, 2009 Application, Terasen Gas advised of a planned Evidentiary Update to provide updated project cost information related to the insourcing of certain elements of customer care services. This information was not fully available at the time the Application and the June 15, 2009 Financial Supplement were prepared. Recognizing the time constraints inherent in managing external contractors involved in the implementation of the Project, Terasen Gas had filed the Application in advance of having the updated financial information in the hope of potentially facilitating an earlier commencement date for the regulatory review process; however, TGI acknowledged that the updated Project costs are now available and are included in this filing.

Terasen Gas had initially intended to include this newly available financial information in a separate Evidentiary Update, to be read in conjunction with the June 2, 2009 Application and the Financial Supplement. However, TGI has taken the step of amending the Application so as to facilitate the inclusion of additional information, or changes in presentation, that were of expressed interest to Commission Staff and intervenors (discussed below). Instead of waiting for information requests to address these issues, Terasen Gas considered it to be beneficial to proactively incorporate the additional information with the planned Evidentiary Update filing. In order to facilitate the review of the evidence provided by Terasen Gas, this Amended Application now consolidates the information in the Application, the Financial Supplement, and the planned Evidentiary Update. It will no longer be necessary to refer to those documents, except that the Appendices to the original Application continue to be relevant and have not been reproduced here.

The matters identified by Commission Staff and intervenors and other stakeholders that TGI has proactively addressed in this Amended Application are:

1. *Alternatives Analysis:* In the Application, Terasen Gas performed an alternatives analysis focusing on what TGI considers to be the two components of the Project: (i) CIS and its implementation, and (ii) insourcing the customer care function. During the Procedural Conference on June 22,



2009, Commission counsel raised the potential to view the Project as consisting of four distinct parts rather than the two parts detailed in the Application. Those four distinct parts are: (i) CIS software¹; (ii) the implementation and maintenance of the hardware and related facilities of the new CIS²; (iii) the operations of the meter to cash process³; and (iv) the call centre⁴.

Commission counsel suggested that Commission staff would like to see the alternatives analysis conducted from both a qualitative and quantitative perspective on that basis. Commission counsel also noted staff's comments related to Terasen Gas' approach to several of the numbers in the Application which, in the view of Commission staff, were at too high a level and did not show how the amounts were derived. TGI advised at the Procedural Conference that it would take advantage of the Evidentiary Update to perform the alternatives analysis on the basis suggested, and to follow up on the financial analysis in conjunction with preparing the revised Project financials. This additional information is included in this Amended Application.

- 2. Issues of Interest to Intervenors: During the Workshop and at the Procedural Conference, intervenors BCOAPO, CEC and COPE noted their interest in further consultation regarding the Project. TGI committed at the Procedural Conference to consult further with these intervenors and endeavour to address issues of particular interest to them at the same time as providing the Evidentiary Update on costs. TGI's objective in doing so was to streamline the IR process as much as possible. Subsequently, Terasen Gas held meetings with BCOAPO, CEC and COPE to discuss the Application and their individual concerns. This filing addresses the key matters discussed in those meetings.
- 3. Letter of Hansen Technologies, dated July 1, 2009: Hansen, the current owner of the Peace CIS technology used by CustomerWorks LP, filed a letter with the Commission dated July 1, 2009, making several statements about the status of the existing Peace CIS. The general contention of Hansen's letter was that the existing CIS platform remains a viable alternative for Terasen Gas in the future. TGI disagrees with this position, and a number of the statements made in the letter are inaccurate in the Company's view. While the letter from Hansen is not evidence in this proceeding, and the letter was filed outside the Commission's sanctioned process, it contains a number of inaccuracies that should be addressed.

¹ Terasen Gas has interpreted this part (i) to address the software evaluation and recommendation only and is referred to in the Amended Application as "CIS Software".

² Terasen Gas has interpreted this part (ii) to include the implementation and maintenance of the CIS software as well as the hardware, and is referred to in the Amended Application as "CIS Implementation & Maintenance". The discussion concerning facilities as they pertain to parts (iii) and (iv) are included in those parts.

³ Terasen Gas refers to part (iii) in the Amended Application as "Billing & Back Office Operations".

⁴ Terasen Gas refers to part (iv) in the Amended Application also as "Call Centre".



the substance of the statements made by Hansen in the course of the alternatives analysis.

The provision of this additional information has necessitated some reorganization of the Application, and most sections of the Application have been revised. Notably, the "Project Description", "Project Justification" and "Project Cost" sections have been revised significantly. The "Analysis and Alternatives" discussion is now a separate Section 4. The "Consultation" section has become Section 5 and has been updated to reflect further discussion with intervenors following the Procedural Conference. Section 6 and Appendix K incorporate and replace the Project Cost Section 5 from the June 2, 2009, Application and the Financial Supplement filed on June 15, 2009. Appendix B has been updated to include recent case study information and Appendix C has been updated to reflect a recently published report from Gartner. Additional appendices are attached in support of the Application's updates with the exception of Appendix W and Appendix Y which are unavailable at the time of this filing and will be filed; it is anticipated, by September 4, 2009. A complete version of the Amended Application body is attached and replaces the document body filed on June 2, 2009, and the Financial Supplement filed on June 15, 2009.

Meeting the Project implementation schedule and effective date of January 1, 2012 will require a Commission decision before February 12, 2010. The Company is hopeful that the additional information provided in this Amended Application will facilitate the efficient consideration of the Application within that timeline.

If you have any questions or require further information related to this Application, please do not hesitate to contact Danielle Wensink, Director, Customer Care & Services at (604) 592-7497.

Yours very truly,

TERASEN GAS INC.

Original signed:

Tom A. Loski

Attachments

cc (email only): Registered Parties



Table of Contents

1.	Арр	lication.		1					
	1.1	Executive Summary							
		1.1.1	Current Customer Care Model and CIS	2					
		1.1.2	Drivers for Change	3					
		1.1.3	Alternatives Analysis and the Proposed Project	6					
		1.1.4	Project Cost and Rate Impact	7					
	1.2	Applica	nt	8					
		1.2.1	Name, Address and Nature of Business	8					
		1.2.2	Financial Capability of Applicant	9					
		1.2.3	Technical Capability of Applicant	9					
		1.2.4	Name, Title, and Address of Contact	9					
		1.2.5	Name, Title, and Address of Legal Counsel	. 10					
	1.3	Propos	ed Regulatory Agenda and Timetable	. 10					
2.	Proj	ect Des	cription and Schedule	.12					
	2.1	.1 The Role of the Customer Care Function							
2.2 Evolution of Terasen Gas' Current Customer Care Operating Model: Business Outsourcing									
		2.2.1	The Client Services Agreement	. 15					
		2.2.2	Current Customer Care Costs	. 16					
	2.3	The Pi Sou	roject Components: New "Packaged Solution" CIS Technology and Strategic urcing Model	. 17					
		2.3.1	Customer Information System	. 18					
		2.3.2	Call Centre	. 22					
		2.3.3	Billing and Back Office Operations	.24					
	2.4	Project	Schedule	. 27					
		2.4.1	Timing of CIS Software Acquisition	.28					
		2.4.2	Timing of CIS Hardware Implementation & Implementation Plan	.28					
		2.4.3	Timing of Call Centre Implementation	.29					
		2.4.4	Billing and Back Office Implementation	.29					
	2.5	Project	Risks and Mitigation	. 29					
	2.6	Prelimi	nary Impact Assessment	. 33					
3.	Proj	ect Just	ification: Drivers for Change	.34					
	3.1	The Co	mpany's Evolving Business Environment	. 34					
		3.1.1	Evolving Policy Environment	. 34					
		3.1.2	Evolving Competitive Environment	. 36					



		3.1.3	The Project Will Help TGI Respond to the Evolving Business Environment	
	3.2	The Im	portance of Customer Service and the Role of the Customer Care Function	
		3.2.1	Customer Service is a Critical Success Factor	
		3.2.2	Evolution of Customer Service	40
		3.2.3	Customer Expectations Regarding Customer Service Delivery	42
		3.2.4	The Project Will Help TGI Address Evolving Customer Expectations	44
	3.3	Evoluti	on of the Outsourcing Market and Recommendations of UtiliPoint	
		3.3.1	Evolution of Customer Care	
		3.3.2	UtiliPoint's Recommendations for Terasen Gas	50
		3.3.3	Current Performance Challenges	52
	3.4	Justific	ation Conclusion: Strategic Shift in Customer Care Delivery	55
4.	Ana	lysis an	d Alternatives	55
	4.1	CIS So	ftware	
		4.1.1	Software Ownership Options	
		4.1.2	CIS Software Options: Custom Build vs. Buying "Commercial off the Shelf"	58
		4.1.3	CIS Options	61
		4.1.4	SAP as Preferred CIS Software Solution	67
	4.2	CIS Im	plementation and Maintenance Alternatives	68
	4.3	Call Ce	entre	77
		4.3.1	Alternatives	
		4.3.2	Analysis of Decision to Insource	
		4.3.3	Summary of Conclusions	
	4.4	Billing a	and Back Office Operations	
		4.4.1	Analysis of Decision to Insource	
		4.4.2	Components of Billing and Back Office	
		4.4.3	Summary of Conclusions	
	4.5	Future	Terasen Gas Customer Care Model	95
		4.5.1	Summary of Alternatives Analysis Results	
		4.5.2	Future Customer Care Model Benefits for Customers and British Columbians .	
5.	Stak	eholder	Consultation	106
	5.1	Pre-Fili	ng Consultation	106
	5.2	Interve	ner Consultation – Post Procedural Conference	106
6.	Proj	ect Cos	t	108
	6.1	Update	d Information from the June 2, 2009 Application	108
	6.2	Summa	ary of Project Implementation Costs	110

7.



	6.2.1	Summary of Changes in Project Implementation Cost Compared with the June 2, 2009 Application	111
6.3	Ongoir	ng O&M Costs	112
	6.3.1	Updated Ongoing O&M Costs	112
	6.3.2	Summary of Changes in O&M Compared with the June 2, 2009 Application	113
6.4	Cost o	f Service and Rate Impact Analysis	113
	6.4.1	Cost Allocation by Utility	114
	6.4.2	Rate Impact and Financial Analysis Approach	114
6.5	Financ	ial Schedules	115
	6.5.1	Summary of the Project Implementation Costs (Schedule S1 in Appendix K)	116
	6.5.2	Summary of Future O&M Costs (Schedule S2 in Appendix K)	116
	6.5.3	The Depreciation Summary and Detailed Continuity Schedule (Schedule S3 in Appendix K)	117
	6.5.4	The Capital Cost Allowance (CCA) Summary and Detailed Continuity Schedule (Schedule S4 in Appendix K)	117
	6.5.5	The Revenue Requirement (Schedule S5 in Appendix K)	117
	6.5.6	The Discounted Cash Flow Analysis (Schedule S6 in Appendix K)	118
	6.5.7	The Cost of Service per Customer (Schedule S7 in Appendix K).	118
6.6	Option	s for Moderating the Impact on Rates	118
	6.6.1	Increasing the Depreciation Period for the new CIS	118
	6.6.2	Use of a Deferral Mechanism for Moderating the Impact on Rates	119
6.7	Project	t Impact on the Benefits Expected from the Banner CIS Conversion	119
6.8	The Im	npact of IFRS on the Cost of Service	120
6.9	The Im	npact of the Proposed Harmonized Sales Tax on the Cost of Service	120
6.10	Conclu	usion	121
Con	clusion	S	122



Index of Tables and Figures

Table 1: Regulatory Timetable as per Order Number G-79-09	10
Table 2.1: Service Activities Performed as Part of the Customer Care Function	12
Table 2.2: Annual Total Customer Care Costs in \$000s, except for cost per customer amounts, for all Terasen Utilities.	17
Table 2.3: Customer Care Project Completion Timetable	27
Table 2.4: CIS Software Risks and Mitigation	30
Table 2.5: CIS Implementation and Maintenance – Risks and Mitigation	30
Table 2.6: Call Centre – Risks and Mitigation	
Table 2.7: Billing Operations – Risks and Mitigation	
Figure 3.1: 2009 Utilities Outsourcing Survey	48
Table 3.1: Utilities Are Reconsidering Their Outsourcing Arrangements, Moving To Strategic Sourcing Models for Their Customer Care Functions	49
Table 3.2: Summary of Service Level Results (July 2008 to June 2009)	54
Table 3.3: Summary of Service Delivery Failures by Month, 2003 – 2009 YTD	54
Figure 4.1: 2009 Utilities Outsourcing Survey	58
Figure 4.2: History of SAP at Terasen	76
Table 4.1: Forecasted Impact of a Shift of 100,000 Inbound Calls	81
Table 4.2: Terasen's proposed approach to Customer Care	92
Figure 4.3 – North American Utility Functions Being Outsourced in 2009	94
Table 4.3: SAP Functional Benefits	97
Table 4.4: Utility Industry Best Practice Service Metrics	100
Table 4.5: Billing	102
Table 4.6: Back Office Operations - Meter Reading	102
Table 4.7: Severity Levels	103
Table 5.1: Customer Advisory Council Meeting Attendance	106
Table 6.1: Project Implementation Costs	110
Table 6.2: Projected Ongoing Annual O&M Costs for 2012	112
Table 6.3: TGVI Customer Care Conversion Project Financial Benefits	119



IN THE MATTER OF THE UTILITIES COMMISSION ACT R.S.B.C. 1996, CHAPTER 473

AND IN THE MATTER OF AN APPLICATION BY

TERASEN GAS INC. FOR THE CUSTOMER CARE ENHANCEMENT PROJECT – THE INSOURCING OF CUSTOMER CARE SERVICES AND IMPLMENTATION OF A NEW CUSTOMER INFORMATION SYSTEM (CIS)

To: The Secretary British Columbia Utilities Commission Sixth Floor, 900 Howe Street Vancouver, British Columbia V6Z 2N3

1. Application

Terasen Gas Inc. ("Terasen Gas", "Terasen", "TGI" or the "Company") hereby applies to the British Columbia Utilities Commission (the "BCUC" or the "Commission") pursuant to section 45 of the Utilities Commission Act, R.S.B.C. 1996, Chapter 473 (the "Act"), for a Certificate of Public Convenience and Necessity ("CPCN") for: (1) the implementation of a new Customer Information System ("CIS"); and (2) insourcing key elements of the Company's customer care services, as detailed in this Application (the "Project"). TGI seeks approval pursuant to BCUC Order No. G-29-02 for corresponding amendments to the scope of services under the Client Services Agreement with CustomerWorks LP to facilitate the Project.¹

Terasen Gas also seeks approval for the creation of a non-rate base deferral account attracting allowance for funds used during construction ("AFUDC") and approval to record incremental operating and maintenance ("O&M") costs associated with the Project that are incurred prior to the Project implementation date of January 1, 2012, for the purposes of permitting cost recovery. Terasen Gas seeks approval pursuant to sections 59 – 61 of the Act for the creation of a rate base deferral account into which the accumulated amount in the non-rate base deferral account will be transferred, effective January 1, 2012, for the purpose of recovering costs through customer rates. The approval of these deferral accounts results in the Project having no revenue requirement impact in 2010 or 2011.

¹ Note that the reference to Commission Order No. G-29-02 in the relief sought is new to this Amended Application. TGI concluded based on the wording of that order that it was desirable to seek explicit approval to change the scope of services under the Client Services Agreement. The draft Order included with the Amended Application has been updated accordingly.



1.1 Executive Summary

The customer care function of Terasen Gas is a vital part of providing service to our customers, and consequently represents a core element of our business. It is the main point of interaction between customers and the Company in all aspects of our business. Providing customers with sustained service excellence rests on Terasen Gas consistently being able to offer a range of communication options, billing and payment alternatives, and additional product and service options. It also requires the ability to manage communications related to outages and restoration of service, provide accurate and timely monthly bills, promptly address customer concerns, and ensure the Company's representatives have appropriate product and service knowledge and regional understanding.

In order for the Company to continue to serve customers well, it needs to adapt and change as customers require new and different services and seek to interact with Terasen Gas through a broader range of communication channels. Underpinning this ability to provide service excellence is a technology platform, referred to as a Customer Information System, or CIS. This platform is used to enable the business processes needed to deliver customer care services. The ability of Terasen Gas to respond to evolving customer service needs is essential to maintaining service excellence in the future. We have undertaken an extensive review of the available customer care operating models and CIS technology alternatives to determine what model and CIS technology will best support the needs of customers and the Company going forward. Based on this review, we have concluded that insourcing the core elements of the customer care function (a 'Strategic Sourcing' model) and implementing a new CIS technology platform under the control of the Company is in the best interests of customers and the Company. The Project is planned for implementation starting in early 2010, to be completed in time to permit a go-live on January 1, 2012. Section 2 of the Amended Application provides a detailed description of the Project and its various components including the call centre, billing and back office functions, CIS technology and CIS implementation and maintenance. It also discusses the Project implementation schedule.

Terasen Gas has taken steps to ensure that the individual components of the Project can be delivered cost effectively. Terasen Gas has obtained quotations for the CIS technology and its implementation through competitive Request for Quotation processes. The Company has also identified potential sites for call centre and billing operations within British Columbia through consultation with experts. We have reached agreement with COPE regarding the future workforce, bringing significant cost certainty to the ongoing labour costs.

Terasen Gas is confident that, assuming the regulatory review of this Application concludes with a Commission decision by mid-February 2010, the Project can be implemented effectively and efficiently under the established schedule. This schedule permits a go-live date of January 1, 2012, for the Project. Implementation at the beginning of 2012, the earliest practical implementation date, will best position Terasen Gas to adapt to evolving customer needs.

1.1.1 Current Customer Care Model and CIS

The Company's customer care function is currently outsourced to CustomerWorks LP under a comprehensive outsourcing arrangement, referred to in industry terminology as a Business Process Outsourcing ("BPO") arrangement. The scope and terms of the BPO arrangement with CustomerWorks LP was defined by a Client Services Agreement dated January 1, 2002,



which was approved by the Commission pursuant to Order No. G-29-02, issued on April 17, 2002.

In 2001, the key drivers that favoured a comprehensive BPO model for the customer care function were cost certainty, maintaining or enhancing customer service levels, and implementation risk transfer related to expanding and redefining operations to support the repatriation of the Company's 535,000 Lower Mainland customers. These customers had historically been supported through an outsourcing arrangement with BC Hydro. At the time of the outsourcing decision in 2001, the Company had already committed to a packaged CIS solution founded on the then market-leading Peace CIS platform. The move to a comprehensive BPO model was consistent with a broader industry trend.

In 2005, one year prior to the end of the initial five year term of the Client Services Agreement, Terasen Gas engaged Douglas Louth Associates Inc. to undertake a market assessment of the outsourced services provided by CustomerWorks LP (see Appendix I) in order to:

- Evaluate whether value to customers exists in transitioning the customer care services currently performed by CustomerWorks LP to an alternate service provider; and
- Evaluate whether value to customers exists in converting the Terasen Gas (Vancouver Island) Inc. ("TGVI") and Terasen Gas (Whistler) Inc. ("TGW") customer base to the contractual customer care environment currently in place to support Terasen customers.

Upon completion of this assessment, TGI concluded that while customer care outsourcing alternatives existed in the marketplace at that time, there was not sufficient confirmation that an alternative was available that would provide value to customers in transitioning the services provided by CustomerWorks LP to an alternate provider. At the end of the initial five year term, the contract with CustomerWorks LP was allowed to roll over annually for successive one year terms. The annual rollover provision has applied since then. In 2006, TGVI and TGW customers were brought into the Client Services Agreement, bringing immediate benefits to customers of TGVI and TGW including longer customer service hours.

1.1.2 Drivers for Change

TGI believes that it is the appropriate time to revisit, and reduce the scope of, the current comprehensive Business Process Outsourcing arrangement with CustomerWorks LP as permitted by the terms of the Client Services Agreement. Section 3 of the Amended Application discusses the drivers that have caused Terasen Gas to re-evaluate the current Business Process Outsourcing arrangement with CustomerWorks LP. They are summarized briefly below.

The arrangement with CustomerWorks LP succeeded in meeting the original outsourcing objectives by providing customers and Terasen Gas with cost certainty and risk transfer, as well as delivering generally satisfactory customer service over much of the time since 2002. Service Quality Indicators put in place as part of the Terasen Gas Performance Based Ratemaking Settlement Agreement have indicated performance has in general met call centre and billing related targets through much of the intervening period (complete SQI results are provided in Appendix J). When service has fallen short of contractual standards, which has happened more frequently of late, CustomerWorks LP has been required to pay contractual penalties to Terasen



Gas. The payment of penalties to Terasen Gas accompanied by service shortfalls is not a sustainable model going forward.

Eleven years have passed since the Peace CIS system was selected by BC Gas, and eight years have passed since the decision was made to enter into a comprehensive Business Process Outsourcing arrangement with CustomerWorks LP. The current scope of services outsourced to CustomerWorks LP will, of necessity, remain in place beyond 2009. There have been three key developments in the intervening eleven years that affect the Company's customer care function and have caused TGI to re-evaluate its current comprehensive Business Process Outsourcing arrangement. Discussion regarding project drivers is addressed in Section 3: Project Justification.

i. *First, the evolution of the Company's business environment since 2002 has changed the customer care needs of Terasen Gas.* Terasen Gas has reached a decision point as to its customer care function as a result of these evolving needs.

The energy environment: The ability of Terasen Gas to retain and add customers is increasingly challenged by volatile commodity prices, housing trends towards smaller multi-unit dwellings, customer perceptions of natural gas, and the growing availability and customer awareness of alternative energy solutions. Policy-driven factors, such as the Carbon Tax, greatly expanded energy efficiency and conservation initiatives as well as a broader range of energy options available require a more skilled, knowledgeable, and flexible customer care staff attuned to the local energy marketplace and responsive to such changes, which is not possible with the current outsourcing arrangement. The energy marketplace and the Company's business model will continue to evolve over the next number of years in response to these drivers. Terasen Gas must be able to manage that evolution in a proactive manner in order to provide the services its customers will and do expect. Managing this evolution effectively requires significant planning so that the appropriate infrastructure investment decisions are made and implemented in time to accommodate such changes.

The competitive environment: TGI's competitive environment has changed significantly over the past ten years. The Company's competitive position has been impacted by factors such as volatility in the natural gas commodity price, a growing use of alternative energy sources and customer perceptions of natural gas. The use of natural gas must overcome two elements of the purchase decision before a buyer makes the commitment to investing in natural gas equipment. One is the economic element, comparing anticipated operating costs to the competitive alternative. The second is the environmental element and how the product increases or reduces greenhouse gas emissions versus the alternative. Different buyers will place different priorities on each element, however, both present challenges that Terasen Gas must address.

ii. Second, customer service is a long term critical success factor and in response to changing customer expectations and enabling technologies, customer care has advanced across industries. As the energy marketplace becomes more complex,



Terasen Gas must ensure that it maintains the loyalty of existing customers and is positioned to attract new customers.

Customer service evolution: In order to differentiate from their competition, respond to changing customer needs, and to sustain the delivery of best practices as supporting technologies have advanced, organizations have changed their customer service structures over time. Terasen Gas is faced with competition as the B.C. energy marketplace changes. Maintaining customer satisfaction and loyalty are important factors to ensure that TGI is positioned for long-term success to the benefit of all customers.

Customer requirements for interaction with Terasen Gas: Research regarding consumer perceptions, as well as customer feedback, suggests that customers now expect public utilities to provide a greater range of communication channels than Terasen Gas is generally able to provide today. This includes more flexibility in moving from traditional voice response centres and hardcopy bill presentment to stronger web support, including online transactional tools and enhanced electronic bill presentment and payment options. In the future, the Company will be able to meet these requirements through the direct control of core customer care services and the implementation of a new CIS platform and contact centre technology suite.

iii. Third, the outsourcing market has evolved, and the full BPO arrangements negotiated in 2000 – 2003 by utilities such as TGI are now entering their second generation. Other utilities are also re-evaluating the BPO approach.

UtiliPoint's review of trends in the outsourcing market: In 2008, the Company retained UtiliPoint International Inc. ("UtiliPoint") to undertake a study of *"Outsourced Customer Care Models in the North American Utility Industry and Beyond",* a copy of which is attached as Appendix B. Attached to the same Appendix is further case study information updated by UtiliPoint in 2009 to reflect the most recent changes in the Canadian marketplace as companies prepare for their next phase of outsourcing. The study indicated that the original drivers for comprehensive outsourcing and resulting operational, pricing and governance models are evolving. Many of the early adopters of comprehensive outsourcing arrangements are reconsidering their original decisions and adjusting their operating models to provide for a hybrid of insourced and outsourced functions – referred to in the industry as Strategic Outsourcing. The second generation agreements are characterized by client control of critical assets and client control over business processes.

UtiliPoint's recommendations for Terasen Gas: UtiliPoint had specific recommendations for TGI, which were to move away from a comprehensive Business Processing Outsourcing arrangement, and to pursue a Strategic Outsourcing model.

As a result of these three developments, Terasen Gas is at a decision point similar to where we were in 2001, but facing a different set of circumstances, challenges and needs. Industry practice has evolved, due in part to advances in CIS products. Restructuring the customer care function at Terasen Gas is necessary to successfully meet the needs of our customers and the



energy market into the future. This Project is critical to customers and our business. We are well positioned to deliver it.

1.1.3 Alternatives Analysis and the Proposed Project

Section 4 includes Terasen Gas' alternatives analysis for the Project. The alternatives analysis provided discusses alternative CIS technology platforms, alternative implementation and maintenance approaches for the CIS platform, alternatives for call centre operations and alternatives for billing and back office operations.

The choice of customer care model is really the primary decision in this Project, and the result of that choice drives the need for other Project components. In proposing the adoption of a Strategic Sourcing model, Terasen Gas has followed the recommendations of UtiliPoint, contained in the report attached as Appendix "B". UtiliPoint identified three customer service models:

- The comprehensive, or Business Process Outsourcing model, akin to TGI's current arrangement with CustomerWorks LP;
- Hybrid models referred to as Strategic Sourcing, in which those transactions that are most efficiently and cost effectively handled externally are outsourced and the utility retains control of those critical business processes that support key technical assets or are directly customer facing; and
- Full insourcing.

According to UtiliPoint, a utility's assessment of the best option should consider a variety of factors:

"The best business strategy for the utility customer service is one where the customer service group business strategy:

- Supports the ownership of technologies that underpin business success
- Enables the development of high quality business processes from those technologies according to business needs to deliver superlative customer service
- Facilitates the management of outside vendors with strong management contracts that improve over time and change in flexible fashion with the needs of the utility business
- Acts as a complement to the business model of the enterprise."

UtiliPoint endorsed a hybrid or Strategic Sourcing model as most appropriate for Terasen Gas. This means continuing to outsource those transactions that are most efficiently and cost effectively handled externally and bringing back under TGI's control those critical business processes that support key technical assets or are directly customer-facing. Consistent with UtiliPoint's recommendation of Strategic Sourcing, Terasen Gas concluded that insourcing the key elements of the Company's customer care function, including ownership and control of a new CIS, represents the best solution to meet our changing business needs. Terasen Gas will continue to outsource specialist functions where it remains the best solution, as in the case of statement printing and remittance processing.



There are several reasons why the proposed Strategic Sourcing model is the best solution for Terasen Gas:

- Customers will benefit from the expanded functional capabilities inherent in the SAP Utilities Customer Relationship and Billing module and proposed changes to service metrics in the call centre and billing and back office operations.
- The integrated CIS solution and direct management of insourced activities that Terasen Gas plans to implement will result in greater control over end-to-end business processes that will be managed internally using the Company's own resources. This will also allow TGI to proactively and cost effectively establish and adjust service quality metrics to meet customer needs and expectations as they change.
- The direct management of call centre and billing staff will allow for greater flexibility in developing and implementing future service changes and in providing customized staff training and education to allow representatives to better understand and serve our customer needs within British Columbia.
- The new CIS platform, the SAP Utilities Customer Relationship and Billing module, identified through our selection process, will integrate with the Company's existing SAP enterprise application architecture and will leverage existing knowledge and experience related to TGI's existing broader suite of SAP applications.
- The implementation of an industry standard contact centre technology suite which supports alternate communication channels including voice, email and online chat will provide options to customers as well as a tool set that supports cost reductions over the long term as a result of increased self-serve.

1.1.4 Project Cost and Rate Impact

TGI believes that the Project is cost effective and the resulting rate impact in 2012 and beyond falls at an acceptable level in light of the importance of the customer care function. Project cost and rate impacts are discussed in Section 6 of this Amended Application, and the detailed financial schedules are included in Appendix K.

The total cost of the Project, based on a January 1, 2012 go-live date, is estimated to be \$122 million including AFUDC. The total O&M costs to provide the required customer care services after the Project is completed are estimated to be \$46 million in 2012, the first full year after the completion of the Project. These have been revised from the values reported in the June 2, 2009 Application of \$155 million including AFUDC for the Project and \$47 million in O&M costs in 2012. The reasons for the reduction are explained in Section 6.

On a cost of service basis, which includes the cost to implement the Project and the O&M costs that are expected to be incurred to support the new Customer Care function, the estimated annual cost per customer has been revised from \$71.50 per customer in 2012 as reported in the June 2, 2009, Application to \$64.00 per customer in 2012. This compares to projected 2012 costs of \$65.50 for the current arrangement, a decrease of \$1.50 per customer annually, while delivering enhanced services and future flexibility for our customers. In 2013, when the full capital cost of the project begins to depreciate, the cost per customer increases by \$8.60 per



customer. After 2013 the annual cost per customer decreases each year. By 2019 the annual cost per customer will be below that of the notional cost of the current customer care arrangement. In evaluating the annual cost per customer of the Project, it is important to note that the Project's ongoing costs are not directly comparable to the current arrangement's costs. The new delivery model and technology solution will efficiently deliver additional services for customers that are not provided in the current arrangement, and Terasen Gas believes that these additional services are necessary to meet the evolving needs of customers.

On a levelized basis over a 20 year period starting in 2012, the changes implemented as part of this Project result in an annual cost of \$67.50 per customer for the new customer care delivery model, revised from \$73.00 as reported in the June 2, 2009 Application. This compares to the notional levelized costs of \$71.70 for the current arrangement, a decrease of \$4.20.

Terasen Gas recognizes that incremental costs result in rate impacts and as a result seeks the most cost-effective solution for customers. In the case of significant Project expenditures, the timing of their recovery in rates, especially as a result of short depreciation periods, can result in higher than normal rate increases over the short-term. The implementation of the new CIS platform for example would generally be treated as software and depreciated over eight years. This treatment causes an increase in rates over the short term that could be smoothed by increasing the depreciation period by two years to ten. Equally, rates could be smoothed by using a deferral mechanism to recover costs from customers over a longer period of time, such as 15 years. These options for moderating rate impacts associated with the Project are examined in greater detail in Section 6 of this Amended Application.

This Project will create approximately 650 new jobs for its implementation and approximately 400 jobs associated with ongoing operations in British Columbia. An economic impact assessment conducted for TGI by KPMG has concluded that the Project's implementation will increase provincial GDP by approximately \$40 million. Beginning in 2012, ongoing operations will increase provincial GDP by over \$25 million annually.

The business processes that are part of the customer care function are critical to the ability of Terasen Gas to provide service excellence to our customers and are fundamental to our business. As a result of the evolution of the Company's business environment, the outsourcing market, CIS technology and TGI's capabilities over the past seven years, Terasen Gas can now retain the additional flexibility inherent in a Strategic Sourcing model, without assuming unacceptable levels of implementation risk. We believe that the Project is in the public convenience and necessity and should proceed at this time.

1.2 Applicant

1.2.1 Name, Address and Nature of Business

Terasen Gas Inc. is a company incorporated under the laws of the Province of British Columbia and is a wholly-owned subsidiary of Terasen Inc., which in turn is a wholly-owned subsidiary of Fortis Inc. Terasen Gas maintains an office and place of business at 16705 Fraser Highway, Surrey, British Columbia, V4N 0E8.

Terasen Gas and its affiliate companies provide sales and transportation services to residential, commercial, and industrial customers in more than 125 communities throughout British



Columbia. The three Terasen utilities, Terasen Gas, Terasen Gas (Vancouver Island) and Terasen Gas (Whistler), provide service to approximately 930,000 customers in the Inland, Columbia, and Lower Mainland service areas on Vancouver Island, the Sunshine Coast, and in Whistler. The distribution network of the Terasen utilities delivers gas to more than ninety-five percent of the natural gas customers in British Columbia. The Terasen utilities also provide extensive energy efficiency and conservation programs as well as technical advice and support regarding a broad range of energy matters to our customers. We also provide integrated alternative energy systems including biogas, solar thermal, geoexchange and district energy systems.

1.2.2 Financial Capability of Applicant

Terasen Gas is regulated by the BCUC. Terasen Gas is capable of financing the Project either directly or through its parent, Terasen Inc. Terasen Gas has credit ratings for senior unsecured debentures from Dominion Bond Rating Service and Moody's Investors Service of A and A3 respectively. Terasen Inc. has credit ratings for senior unsecured debentures from Dominion Bond Rating Service of BBB (High) and Baa2 respectively.

1.2.3 Technical Capability of Applicant

Terasen Gas has one of the largest (as defined by implemented functional components) SAP systems in Canada. The Company has a long established track record of successful implementation of SAP projects, from the initial implementation of SAP Financials, HR and Supply Chain functions in 1998, through the subsequent implementations of Meter Management, Work Management, Preventive Maintenance and numerous functional and technical upgrades to all components of the SAP product. Terasen Gas is well versed in the SAP methodology, and has experienced resources and procedures to ensure appropriate Project oversight and long-term sustainability. Terasen Gas has twenty years of experience in successfully coordinating and managing multiple third-party service providers to deliver complex systems successfully.

The Company is also confident that it has all the requisite capabilities to hire the additional employees required for the proposed customer care model.

Further, Terasen Gas and its affiliated companies have gained significant insight over the past seven years regarding the capabilities required to support the business processes necessary to provide quality service to approximately 930,000 customers. The consolidation of our customers onto a common CIS platform and the knowledge that has been gained through oversight of the outsourced end-to-end customer experience positions the Company to implement a customer care service strategy that will benefit both customers and the Company over the long term.

1.2.4 Name, Title, and Address of Contact

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E-mail: tom.loski@terasengas.com Regulatory Matters: regulatory.affairs@terasengas.com

1.2.5 Name, Title, and Address of Legal Counsel

Matthew Ghikas Fasken Martineau DuMoulin LLP 2900 – 550 Burrard Street Vancouver, B.C. V6E 3G2 Phone: (604) 631-3191 Facsimile: (604) 632-3191 E-mail: mghikas@fasken.com

1.3 Proposed Regulatory Agenda and Timetable

Terasen Gas is of the view that a written regulatory review process, including Information Requests and Final Submissions, is reasonable and appropriate for the Commission's review of this Application.

Terasen Gas is in agreement with the Regulatory Timetable as per BCUC Order Number G-79-09 which is included below, for ease of reference.

However, Terasen Gas notes that in order to meet the Project implementation schedule, a decision by February 12, 2010, is critical. Based on the current schedule, this will mean a short turn-around time between the filing of submissions and a Commission decision date. The significance of the February 12, 2010, date is the actual start date for the Project work. As will be highlighted throughout this document, Terasen Gas will require third party support from various companies to successfully implement the new CIS. All of these companies need to have a start date that they will commit to providing resources to support the Terasen Gas implementation. This date has been articulated as March 1, 2010. Even though all the parties involved in the planning of the new CIS are aware that the project going ahead is dependent upon regulatory and Terasen Gas management approval, they all must balance their own business priorities. A decision date that jeopardizes a March 1, 2010 project start date increases the risk that the resources that were planned for this initiative will be redeployed to another project that will have approval prior to TGI's Project approval. This could result in delaying the start date, cost increases, and the January 1, 2012, go-live date would be delayed, which in turn could lead to potential cost increases.

Table 1:	Regulatory	Timetable as	s per Order	Number (G-79-09
	rogulatory	Third abic a		T turno or v	01000

ACTION	<u>DATE (2009/2010)</u>
Planned Evidentiary Update/Amended Application	Friday, August 28
Planned Evidentiary Update/Amended Application Workshop	Wednesday, September 9
Second Procedural Conference	Friday, September 11
BCUC Information Request No. 1	Wednesday, September 16

TERASEN GAS INC.
CUSTOMER CARE ENHANCEMENT PROJECT CPCN
INSOURCING OF CUSTOMER CARE SERVICES AND IMPLEMENTATION OF A NEW CIS



Intervenor Information Request No. 1	Monday, September 21
TGI Response to Information Request No. 1	Friday, October 2
Intervenor Evidence (if required)	Monday, October 12
BCUC Information Request No. 2	Monday, October 19
Intervenor Information Request No. 2	Monday, October 19
Information Request No. 1 on Intervenor Evidence from all Parties (if required)	Friday, October 23
Intervenor Response to Information Requests (if required)	Friday, November 6
TGI Response to Information Request No. 2	Monday, November 9
Potential Oral Hearing or Negotiated Settlement Process Commencement	Monday, November 16
FOR ORAL OR WRITTEN HEARING	
TGI Final Argument Submissions	Monday, December 7
Intervenor Final Argument Submissions	Monday, December 21
TGI Reply Argument Submissions	Wednesday, January 6, 2010



2. Project Description and Schedule

The Project represents a transition from comprehensive Business Process Outsourcing to a Strategic Sourcing model. Upon its completion, those transactions that are most efficiently and cost effectively handled externally will remain outsourced. TGI will take control of those critical business processes that support key technical assets or are directly customer facing.

The purpose of this section is to describe the role of the customer care function; the Company's existing customer care environment; the Project's individual components and estimated costs; the Project schedule; and Project risks and mitigation.

2.1 The Role of the Customer Care Function

The customer care function is the primary means through which customers interact with the Company, and is thus a critical component of our business. The customer care function of a public utility such as Terasen Gas generally includes a combination of service activities and infrastructure devoted to providing initial and ongoing service to customers.

The specific customer care services included within Terasen Gas' customer care function are set out in the following table.

	Service	Description
1.	Call Centre	Communicating with customers via telephone, fax, electronic mail, internet and regular mail. Communications include opening or closing accounts, moving and responding to customer inquiries and requests. Certain activities, such as opening an account and moving, are addressed only by telephone. The traditional technology channel for customer contact is the call centre supported by both self-serve and agent handled options.
2.	Billing (and Payments)	The billing function includes establishing and maintaining rates and prices, determining tax applicability, calculating usage based on specific equipment and installation characteristics, calculating charges and taxes based on usage, applying special charges and payments, and formatting and printing statements to be delivered to customers. Currently the majority of the monthly statements are produced in paper form and are delivered by mail. On request, statements can also be produced in electronic format for customers who prefer to retrieve their statement electronically from the Company's internet site.
		Receiving and processing customer payments. While a large number of customers continue to make payment of their monthly statement by mail, a growing number use electronic means, such as direct deposit or online payment through their bank's website.

Table 2.1: Service Activities Performed as Part of the Customer Care Function



	Service	Description
3.	Collections	Managing activities to secure payment of arrears balances on active accounts including specific messaging, notification and disconnection of services related to active customers. The collections function also includes the placement, reporting and recovery processes related to terminated account balances.
4.	Contract Management	Contract management includes the agreements specifically negotiated to support industrial and transportation customers. In recent years this has been extended to include contracts in support of marketers providing commodity service to customers under the commercial and residential customer choice programs.
5.	CIS System Support and Maintenance	Supporting daily system operations, interface requirements and controls, application changes including configuration changes and enhancements to support changing business needs, and periodic technical upgrades to ensure ongoing sustainability.
6.	Meter Reading	Most utility services are based on metered commodity usage. Meter readings provide the basis for determining the amount of billable consumption for a scheduled billing period. Currently meter reading is performed manually on a bi-monthly basis. When an actual meter reading is not available at the time a monthly bill is being prepared, an estimated reading is calculated.

Providing these customer care services requires the following infrastructure and human resources:

- Recruitment, training and monitoring processes to ensure the necessary human resources to carry out the customer care services as well as scheduling, monitoring and quality assessment tools required to measure and manage ongoing customer service quality;
- Facilities and tools devoted to customer care services, including computers, telephones, office space and call centre technologies required to support optimal call routing, customer self serve and performance reporting; and
- Software, interfaces and related information technology to manage and support the customer care services. The CIS is the core software for managing customer communications and billing. It includes the data repository of all current and historical information required to support all of the customer care business processes.

Technical resources, methodologies and controls are also needed to ensure:

- System stability and corrective actions where necessary;
- Performance levels are met;
- Interface requirements are met where applicable;



- A comprehensive understanding of the underlying business rules to ensure system changes can be implemented effectively and efficiently;
- Quality control over new functional and technical implementations to ensure costeffective sustainability; and
- Auditable controls to ensure legal and regulatory compliance can be demonstrated.

Throughout North America public utilities have used different business models to provide customer care services. Traditionally customer care services in the utilities industry had been supported internally. Over the past ten years, some utilities have chosen to outsource customer care services completely while others employ a mixture of the two, outsourcing some services and providing others in-house. As explained previously, complete, or end-to-end, outsourcing arrangements that include the provision of customer care services, responsibility for managing and owning the business processes and the CIS platform, are referred to as Business Process Outsourcing or BPO. Outsourcing models that provide for a hybrid of insourced and outsourced functions while retaining internal control and management responsibility for the business processes and CIS platform are referred to as Strategic Sourcing.

2.2 Evolution of Terasen Gas' Current Customer Care Operating Model: Business Process Outsourcing

Terasen Gas currently operates under a Business Process Outsourcing model that has been in place since 2002. The services are provided under the Client Services Agreement ("CSA") with CustomerWorks LP. The background to that arrangement is set out below. These terms of the Client Services Agreement also dictate and restrict the available options open to Terasen Gas going forward.

In 1999, Terasen Gas (then BC Gas) received approval from the Commission to implement its own CIS solution called Project Mercury based on a successful pilot project implemented in 1998 for 35,000 customers. Project Mercury was to consist of a CIS and call centre infrastructure to support the centralization of call handling for all of Terasen Gas' Interior customers as well as replacing the legacy CIS platform which could no longer be supported. The expectation at that time was that the Company would need to begin to develop operational capabilities and implement technologies that could support the transition of Lower Mainland customer care service delivery from BC Hydro to BC Gas. The underlying CIS platform selected was the Peace CIS, which was a leading packaged CIS solution available in the marketplace at that time.

Prior to 2002, Terasen Gas' customer care services were provided to its Interior customers primarily through in-house facilities and resources. Lower Mainland customers were supported through a transitional outsourcing arrangement with BC Hydro resulting from the 1988 purchase by Terasen Gas of the Lower Mainland gas division of BC Hydro. By 2001, BC Hydro had advised that it also needed to address its CIS legacy issues and it was not interested in continuing to support the Company's gas customer needs for the Lower Mainland service area. To accommodate this change, Terasen Gas began work on a service delivery strategy for the 535,000 Lower Mainland customers that were to be repatriated. The strategy involved an increased build-out of the Surrey office location, which was expected to house the additional staff needed to support the additional customers.



A review completed after the implementation of the first two components of Project Mercury concluded that since the capital costs were likely to be higher than forecast and implementation risks had increased, it would be prudent to explore alternatives to a fully insourced customer care model. The anticipated capital cost over run related primarily to the facilities required to support the customer care services rather than the CIS system. The facilities alternative being considered was the reconfiguration of the Surrey operations centre, under construction at that time, to accommodate a new Lower Mainland call centre facility. This ultimately led Terasen Inc. to enter into discussions with Enbridge Inc., which was in the process of assessing the Peace CIS platform for industrial billing. At that time, Enbridge had significant excess call centre and billing support capacity in its existing operating environment that could be leveraged to accommodate the customer service needs of Terasen Gas. Enbridge also had already invested in call centre related technologies that could be utilized for Terasen Gas' larger customer base post-repatriation. The discussions with Enbridge concluded with the agreement to form "CustomerWorks LP" (also referred to as "CustomerWorks" or "CWLP") as a joint venture that would provide outsourced utility customer care services to both companies, as well as marketing these services to the utility industry.

Terasen Gas transferred its customer care assets, employees, and responsibility for the complete management of the customer care processes effective January 2002 to CustomerWorks after receiving Commission approval. The transfer of assets included ownership of all of the technology assets required to support the services including the hardware and software licences associated with the Peace CIS system. The arrangement was formalized in the Client Services Agreement. The agreement received Commission approval on April 17, 2002, by Commission Order No. G-29-02 and remains in place today.

2.2.1 The Client Services Agreement

As indicated above, the Client Services Agreement defines the scope of services provided under the current Business Process Outsourcing (BPO) arrangement with CustomerWorks LP. These contract provisions are foundational to understanding the alternatives investigated by Terasen Gas, which are discussed further in Section 4.

A copy of the CSA as well as any new schedules related to additional services added as amendments to the agreement is included in Appendix L. After the expiry of the initial five year term in 2006, the CSA is automatically renewed in perpetuity for additional terms, each being one year. The services included in the CSA are customer contact (call handling and correspondence services), meter reading, billing support, industrial and off-system sales, credit and collections, and the technical support of the current CIS.

In mid-2002, CustomerWorks LP reached an agreement with Accenture Inc. to take over responsibility for the delivery of customer care services under the CSA on a subcontracting basis. Since that agreement was negotiated, Accenture Utilities Business Process Outsourcing Services, a subsidiary of Accenture Inc., has provided all customer care services set out in the CSA on behalf of CustomerWorks LP to Terasen Gas. Terasen Gas is not privy to the details of this subcontracting arrangement.

In 2005 the Commission approved the conversion of TGVI and TGW customers from the Banner customer information system and largely insourced customer care operating model used by these companies, to the outsourced model used by Terasen Gas Inc. under the CSA with CustomerWorks LP for the base services provided in the CSA. The services under this



amendment to the CSA were to be provided to TGW and TGVI using the same underlying business processes and technologies as were being provided to the Company's Lower Mainland and Interior customers. This change was implemented in March 2006 and has garnered the benefits to customers as expected in the application. A copy of the scope and cost of these additional services is referenced as Schedule H to the Client Services Agreement. Commission Order No. C-15-05, approving the conversion of TGVI and TGW, included a condition that TGVI accept any deficit from the project should there be a subsequent conversion to a new CIS before realizing the benefits unless TGVI can demonstrate that a subsequent conversion preserves or exceeds the benefits anticipated in the 2005 application.

Other material amendments were made to the CSA in 2004 and in 2007 to support commodity unbundling for commercial and residential customers. These amendments are included as Schedules F and I to the CSA in Appendix L.

In 2008, Terasen Gas undertook an evaluation of the Company's customer care operating model and the provisions of the CSA to support changes in the model's structure. The current outsourcing arrangement imposes limitations on the options available to Terasen Gas. These contract provisions are foundational to understanding the alternatives that Terasen Gas investigated to support this Project. The Client Services Agreement includes a right of first refusal provision whereby, if Terasen Gas chooses to go out to market to obtain cost estimates for continued outsourcing of the customer care services, the Company is required to include all of the services included in the agreement. If Terasen selects an alternate provider through this process, CustomerWorks LP has the right to retain the work by matching the selected bid in terms of cost, scope and quality of service articulated in the selected response. This right of first refusal provision is critical in this regard because it restricts the Company's ability to look at potential alternate providers for subsets of the services currently provided under the Client Services Agreement. Further information regarding TGI's alternatives analysis is provided in Section 4.

2.2.2 Current Customer Care Costs

Currently, the total cost of the customer care function is the cost of the Client Services Agreement plus the cost of the Terasen Gas contract management group that oversees the delivery of services as stipulated in the agreement. This group is also responsible for managing the implementation of new service requirements and regulatory and legislative changes.

The total cost of the customer care function for all of the Terasen Gas companies is set out in Table 2.2 below.



Table 2.2: Annual Total Customer Care Costs in \$000s, except for cost per customer amounts, for all Terasen Utilities.

	Service Component	2002	2003	2004	2005	2006	2007	2008	2009p	2010p	2011p	2012p
1	Base Contract (CSA)	35,487	42,278	42,864	43,526	47,186	49,179	50,117	52,026	53,257	54,495	60,504
2	Other Services	40	52	41	120	151	203	173	217	221	225	230
3	Scope Changes		52	29	8	-	104	106	98	98	98	113
4	Subtotal	35,527	42,383	42,935	43,654	47,337	49,486	50,396	52,340	53,576	54,818	60,846
5	Cost /Customer	46.24	54.85	54.92	54.99	53.03	54.35	54.57	55.88	56.80	57.62	63.40
6	Administration	221	250	330	445	456	436	517	776	797	819	842
7	Banner Conversion					(706)	124	1,549	1,462	1,379	1,287	1,200
8	Total Customer Care	35,748	42,632	43,264	44,099	47,088	50,046	52,463	54,578	55,752	56,924	62,888
9	Cost /Customer	46.52	55.17	55.35	55.55	52.75	54.97	56.81	58.27	59.10	59.83	65.53

Source: TGI Finance, SAP; T4

The costs for the period of 2002 to 2008 are actual costs incurred. The 2009 costs in Table 2.2 are projected costs. The total cost of the Client Services Agreement for the Terasen Utilities is projected to be \$52.3 million in 2009 and to increase to \$60.8 million by the end of 2012. This increase is the result of the automatic one-half of inflation adjustment made each year to the per customer charge and the addition of new customers to the system. The projected annual increase in the total cost as a result of the inflation adjustment alone is expected to be approximately \$600,000 for 2012 and beyond. The cost per customer will rise from a projected \$55.88 in 2009 to \$63.40 in 2012 based on the inflation adjustment. Changes necessitated by regulation or legislation during this period would add to that cost.²

Line 6 includes the total cost of the contract management group, and line 7 includes the cost of service of the conversion of the TGVI customers from the Banner System to the Peace Energy customer information system that was completed in March 2006. Total costs for the entire customer care function for the Terasen Utilities are expected to increase from a projected \$58.27 per customer in 2009 to \$65.53 in 2012. This assumes that no additional investment is required in the existing arrangement.

The costs included in the table above also assume that there will be no material changes to systems for business processes over the period. Any changes initiated by the Company will be subject to the pricing structure of the current arrangement. TGI believes that the proposed Strategic Sourcing model will provide cost-effective and more flexible delivery of customer care services.

2.3 The Project Components: New "Packaged Solution" CIS Technology and Strategic Sourcing Model

The Project is centered on two key changes: the insourcing of the key elements of customer care services, and the implementation of a new CIS. For the purposes of providing a Project description in this Section and performing the alternatives analysis (see Section 4), TGI has disaggregated these two key elements into four Project components: CIS Software, CIS Implementation and Maintenance, Call Centre, and Billing and Back Office Operations. Each of these components is considered in turn. However, the components of the Project are integrated

² The introduction of the carbon tax, and the requirement of TGI to collect it, is an example of a legislative change that resulted in an additional cost under the Client Services Agreement.



and dependent on one another, and this becomes a particularly important consideration in the assessment of alternatives in Section 4.

2.3.1 Customer Information System

This section speaks to the key components of the Customer Information System (CIS): the software, the implementation of the software (including the data conversion from the legacy systems and integration with the other Terasen Gas systems), and the sustainment organization to support the system in an operational environment. While each is addressed separately, all three must be considered together in planning for the successful implementation of a new CIS platform.

2.3.1.1 CIS Software

This section provides an overview of the scope of CIS software and Terasen Gas' preferred CIS software solution.

2.3.1.1.1 Overview of Customer Information Systems

The CIS is the core information technology software used for managing customers' accounts and meeting customer service demands. It is also the data repository for all customer, premise, meter and equipment-related information including billing and payment details. It is the critical information source and business process enabler for customer contact and service utilized by everyone in the process from front-line Customer Service Representatives (CSR) to back-office billing function support staff. It is the conduit of information to and from all the other systems supporting the end to end meter to cash process – from field service crews to collections agents to financial and regulatory accounting.

A further breakdown of the functional components of the CIS required by Terasen is as follows:

- Premise, customer and account information;
- Rates & pricing;
- Billing;
- Cash processing;
- Customer service field work;
- Revenue accounting;
- Credit & collections;
- Meter reading information;
- Metering & equipment information;
- Marketing information in support of initiatives and programs;
- Reporting & analytics;
- Web access ability to provide Customers with alternative channels for access to information and services; and
- Customer Choice the ability to facilitate deregulation.

For a comprehensive list of detailed functional requirements as identified by Terasen, refer to Appendix D - CIS Vendor RFQ, pages 82 – 254.



In addition, there is software which is not necessarily inherent in a CIS but complimentary to a CIS and supports the overall CIS solution. Software for bill composition, data archiving, online help and training are the areas that Terasen includes in an overall CIS software solution.

2.3.1.1.2 Terasen Gas' Preferred CIS Solution

Terasen proposes to acquire, configure and implement a combination of packaged software to comprise its overall software solution for CIS. It will consist of the following components:

CIS Software: For the Terasen Gas CIS software solution, the Industry Solution for Utilities – Customer Relationship & Billing (IS-U/RC&B) product from SAP will be implemented.

Supplemental Software: To provide a comprehensive CIS software solution, some additional software will also be required to meet specific requirements that are not inherent in CIS software but are required as part of an overall solution.

- Bill Composition. Terasen Gas will use bill composition software, Streamserve Utilities, from the software vendor Streamserve;
- Documentation and training. Terasen Gas will use application simulation software, UPerform from software vendor RWD for system and user documentation and training material development;
- Data Archiving. Terasen Gas will use archiving software Archive Link from the software vendor Open Text to facilitate data archiving and retrieval.

The selection of this CIS packaged solution was the product of a thorough analysis of the leading products, taking into consideration an extensive list of functional and technical requirements as outlined in Appendix D. As outlined in Appendix C, Terasen Gas reviewed the various vendor and product profiles utilizing independent analysis from industry expertise such as Gartner and Micon Consulting. Finally, Terasen Gas factored in the ongoing operating cost of the solution, not just the ongoing licensing fees of the software, to determine that the preferred CIS solution represents the optimum balance between system requirements, providing a solid foundation for any future requirements and cost.

The total capital cost of the software required for the recommended CIS solution is \$6.1 million, excluding AFUDC. Included in this cost is the CIS software, the complimentary software as identified above, taxes, \$USD exchange and the consulting services provisioned to support Terasen in the software selection process.

The software solution selected by Terasen Gas will provide the optimum solution for customers and the Company, and the requisite functionality to meet evolving needs.

2.3.1.2 CIS Implementation and Maintenance

The second element of the overall CIS solution is the implementation and maintenance strategies. In this section, TGI begins with a discussion of CIS implementation, including the key



roles and responsibilities of the various groups required for the successful implementation of the CIS. Terasen Gas then describes the maintenance strategy for CIS and how it dovetails with Terasen Gas' existing overall maintenance model for SAP.

2.3.1.2.1 CIS Implementation

This section describes the key roles and responsibilities in the successful implementation of the CIS solution proposed by Terasen Gas.

2.3.1.2.1.1 System Integrator

Once the software solution has been established, the next phase of the Project is the implementation of the software. TGI has retained, through a competitive process, an experienced System Integrator ("SI") to fulfil this role.

The implementation of a CIS is complex and requires many different skills to be successful. A key role in the implementation of the CIS is that of an experienced System Integrator. The System Integrator is a company that specializes in building complete computer systems by putting together components from different vendors. Unlike software developers, systems integrators do not primarily produce original code, but instead they enable a company to use off-the-shelf hardware and software packages to meet the company's computing needs. The SI's experience in implementing the software is critical to the success of the Project. Working with key members of Terasen Gas, the SI will take a leadership role in all phases of the Project. It will establish the Project implementation methodology and the Project support tools. It will work with Terasen to provide expertise on the overall design of the solution based on Terasen's defined requirements and their experience of what has been done successfully before at other utilities as well as provide implementation resources for the software. It will provide assistance to Terasen in developing training and a change management plan specific to a CIS implementation as well as provide project management resources.

HCL Axon was selected to be the System Integrator for the Terasen Gas CIS implementation following a competitive solicitation and an extensive evaluation process. For details on the SI alternatives considered and the process followed to come to the recommendation, refer to Section 4.2 and Appendix C.

2.3.1.2.1.2 Additional Third-Party Implementation Resources

Terasen Gas has staffed its internal IT organization with the primary focus to operate its existing SAP platform. To undertake a project of this size, Terasen Gas will have to supplement its existing in-house resources. Terasen Gas will utilize many third party consultants to ramp up to the resource levels required for a successful CIS implementation without jeopardizing the support activities of the rest of SAP. Terasen intends to use third party expertise to supplement in-house resources in the areas of Project and technical management, process design and documentation, change management, training, data conversion, supplemental subject matter experts should they be required, supplemental resources for modifications to existing processes, and interfaces as required as well as infrastructure and network support. Terasen has established relationships with most of the third parties anticipated to be involved in this



Project and has conducted due diligence in reference checking with those who Terasen Gas will be working with for the first time (e.g. Streamserve, RWD, etc.) and is confident that their demonstrated competence in the areas required will continue into the CIS initiative.

2.3.1.2.1.3 Vendor Involvement in Implementation

Terasen Gas believes that the involvement of the software vendor will greatly contribute to a successful Project. In its CIS implementation, Terasen Gas will utilize the expertise of the chosen software vendor, SAP, in critical roles of the Project. Terasen firmly believes that SAP's involvement in solution architecture as well as specific subject matter expertise in web process integration and inter-company data integration leads to a better overall solution. Terasen also intends to utilize resources from SAP consulting and global support in a quality assurance role throughout the Project to take advantage of their expertise and experience in supporting customers post go-live. This strategy allows Terasen Gas to take advantage of lessons learned from other SAP CIS implementations from the viewpoint of SAP global support. By having global support assist in identifying key decisions in the design, build and test phases of the Project that could have an impact post go-live, will significantly mitigate the risk of post-implementation issues that other utilities have encountered in their implementations and allows for a smoother transition to support. SAP will also provide additional expertise in how to optimize the SAP solution during various phases of the Project.

2.3.1.2.1.4 Terasen Gas Resources Required For Implementation

Terasen Gas resources with relevant SAP and CIS expertise will provide leadership in the overall Project governance and CIS system design.

Terasen Gas will provide subject matter experts in the various functional areas described in section 2.3.1.1.1 above. From an SAP expertise perspective, Terasen Gas has used and maintained SAP software to support other business processes for over ten years. This proven expertise allows Terasen to also provide supplemental technical expertise with the Terasen environment including the resources required to integrate the new solution with other SAP components and other software systems used by Terasen Gas in the execution of the end to end meter to cash process where required. Terasen Gas intends to hire an additional 7 functional analysts and 3 technical resources to supplement the Project staffing provided by the system integrator. It is the intent of Terasen Gas that these 10 supplemental staff will transition to ongoing CIS maintenance once the Project is completed.

2.3.1.2.2 CIS Maintenance

Once the system has been implemented and stabilized, ongoing support transitions from the Project team to the sustainment organization. Terasen intends to leverage its existing sustainment organizational structure for CIS.

The role of the sustainment organization is to provide functional and technical support for the application. This group is responsible for all break/fix activity of the application, planning and applying all software patches and mandatory fixes of the hardware, software and database



supplied by the vendor(s) and provides functional expertise on how the system operates and to evaluate requests from the business as to how improvements or changes can be made. This group is also responsible for the planning and facilitation of all system enhancements for the system ongoing in conjunction with key business resources. Based on the nature, complexity and size of the enhancements, these are either done by the sustainment group themselves or with the assistance of third parties if required.

Terasen Gas already has an extensive SAP installation and a mature support model. Through years of experience with the integrated nature of SAP and the deep business process knowledge required to maintain it, Terasen Gas has found the most cost-effective model is to manage SAP with internal resources. By leveraging the existing model, Terasen only needs to add incremental resources to incorporate the CIS maintenance staffing requirements. Terasen Gas will add 7 functional and 3 technical resources to the existing Enterprise Delivery and Support group to provide CIS application maintenance.

TELUS currently supports all of Terasen's server, desktop, network and helpdesk requirements. The support for the incremental hardware required by the CIS will be incorporated into the existing support arrangement with TELUS. For details on the maintenance alternatives considered, refer to section 4.2.

2.3.1.2.3 CIS Implementation and Ongoing Operating Costs

The capital cost to implement the new CIS platform is anticipated to be \$58.2 million, excluding AFUDC. These costs reflect the internal labour, third-party support, hardware, software and project expenses for the Project. Included in these costs is also an anticipated three month transition period after the initial go-live date where project resources will be available to support the go-live and the transition to the support organization.

It is anticipated that the ongoing cost to support the CIS will be \$2.7 million annually starting in 2012. The scope of the support costs are the annual software licensing fees, the support services provided by TELUS, the costs of the incremental internal staffing as mentioned above and any third party support for interfaces required by the new CIS system. This amount is included in the financial analysis.

For further details on project costs, see Section 6.

Terasen Gas believes that it has proposed a skilled and experienced team to implement the new CIS platform. Terasen conducted a robust evaluation process to procure the services of the System Integrator (as outlined in Appendix C). The selection of an experienced SI, coupled with Terasen Gas' and SAP's experience with the platform and the implementation of other major components of SAP, position Terasen Gas well for the successful implementation and ongoing support of the new CIS.

2.3.2 Call Centre

A critical feature of this Project is the move to an insourced call centre model. Terasen Gas believes that it is in the best interests of customers and the Company for TGI to take control of this key customer interface. This section will describe the three components that make up the



call centre solution in this Project as well as the specific cost contribution of the call centre to the Project.

2.3.2.1 Call Centre Components

The call centre component of the Project includes the following three components:

- 1. Staffing
- 2. Facilities
- 3. Technologies

Staffing

Based on current call volumes and service levels Terasen Gas is expecting to require a workforce of approximately 200 full time equivalent employees to support the call centre functions. This staffing estimate will be further validated through the CIS blueprinting phase of the CIS project as well as the design workshops that are planned related to the implementation of the call centre technology solution. The move to a more robust technology platform will provide efficiencies that are not achievable in the current environment. Terasen Gas has also undertaken a sensitivity analysis to understand the possible impacts of changing customer preferences related to various alternate communications channels. In particular, the analysis looked at the impact of a significant move to either self-serve for a portion of the inbound calls or a move to either e-mail or online chat as a more cost-effective service option. As the tools to support these opportunities become available to customers the staffing levels will be re-evaluated and reset to reflect a changed operating environment. The results of this analysis are described in Section 4.3.

The call centres will be staffed with Terasen Gas employees having regional knowledge and commitment and who are trained to handle the complex requirements of an energy utility. This will be reflected in an improvement in service quality for customers as Terasen will have direct control over both staff training and the scripting and business processes inherent in the new CIS. The majority of these new hires will be covered by a new collective agreement negotiated with COPE, designed to reflect the specific employment conditions and compensation alternatives required to support an attractive and competitive call centre operation and providing greater cost certainty related to ongoing labour. This separate collective agreement addresses the operational and compensation issues that are unique to a call centre work force. It will require hiring, training and retention strategies that will be different from traditional utility operations. The labour mix in terms of full time versus part-time staffing will also be unique and will require a different management approach. The collective agreement has been filed confidentially under separate cover.

Facilities

The Project plan includes two separate call centre locations, required to support a fully redundant failover site in the event of a disaster, one in the Lower Mainland and one in the Interior of the province. The fall back site will ensure there is no interruption in service related to gas emergency calls in the event that one of the two sites is unavailable. The facilities



discussion in Section 4.3 describes the process undertaken to identify the potential locations and facilities required to house these new utility call centre services. It also discusses the various options available to equip and secure the facilities. The selected locations will not only achieve the need for full redundancy but will also ensure long term access to a knowledgeable and skilled labour force.

Technologies

The call centre technology decision was determined through a request for quotation targeted to the leaders in the industry. The functionality requested was based on a standard suite of offerings currently available in the marketplace and generally accepted and expected for companies of our size. Similar to the approach taken related to the CIS, Terasen was looking at standard offerings rather than a customized solution. One of the drivers for taking this approach was to acquire technologies representative of other utilities of our size. The tools in place to support our customers today through the outsourcing arrangement lag behind what is currently standard in the utilities industry. In particular, the current environment does not support the transition to a multi-channel platform in the future such as integrated email support or online chat.

An investment in new call centre technologies will also allow the Company and its customers to experience the full benefits of the value and potential cost savings these technologies support.

Call Centre Costs

It is anticipated that the capital cost to establish call centre operations, including technologies, will be \$33.2 million, excluding AFUDC, plus \$7.7 million in deferred O&M. On an ongoing basis the cost to support this area of operations will be \$16.1 million annually.

Summary

In summary, the new call centre environment, being a combination of the right technologies in the right locations with a sustainable skilled work force, is required to ensure that the critical customer facing business processes are successful. Terasen Gas believes that it is in the best interests of customers and the Company for TGI to take control of this key customer interface. The call centre solution proposed in this Application includes establishing two in province call centre facilities to ensure that full redundant failover is available for emergency call handling. The Company has negotiated a new collective agreement with COPE specifically designed to support the special needs of a call centre work force and to provide cost certainty in the future.

Additional societal benefits accruing to the communities chosen for the new operating centres and the province are also discussed in Section 4.5.

2.3.3 Billing and Back Office Operations

In the area of billing and back office operations a Strategic Sourcing solution is the best option for the Company and its customers. In areas where specific utility process knowledge is necessary or where direct access to the CIS is required, Terasen is provisioning for this work to



be supported internally. For those business processes characterized by high volume, low complexity processing, and requiring specialized equipment, the Company intends to continue to outsource these services.

Billing and back office operations includes work related to back office billing for both mass market and industrial customers, exception handling, complex billing, payment processing, meter reading and active credit and collections. It also includes a broad range of third party agreements that support specific business processes.

Billing and back office operations includes the most complex and utility specific business processes and requires the greatest depth of utility or client specific knowledge. Today it is the root cause of the majority of customer escalated complaints. There is also a lack of appreciation of the impact that billing exceptions, including high bills and extended billing periods, will have on customers and their experience in the call centre. The lack of integration in the current outsourcing arrangement between billing and the call centre results in many billing related inquiries being inadequately addressed.

Through this initiative, billing and back office operations will be restructured as a strategic sourcing solution with the complex work being performed internally at the new Lower Mainland call centre facility. This section will describe the four components that make up billing and back office operation as well as the specific cost contribution of billing and back office operations to the Project.

2.3.3.1 Billing and Back Office Operations Components

The billing and back office operations aspect of the Project consists of the following four components:

- 1. Staffing
- 2. Facilities
- 3. Technologies
- 4. Strategic Sourcing

Staffing

The targeted skill set required for these billing and back office roles is different than what would be expected in a call centre environment. Historically, when the work was performed in house by Terasen Gas, turnover in the billing area was very low. This ensured that the quality of service is sustained and the level of knowledge in this area continues to grow. Terasen will leverage existing expertise in the Company as a platform to build the level of knowledge required in this area. Recruiting and training strategies will ensure that we have the right skill base going in.

The projected staffing level for the portion of the billing work that will be supported internally is approximately 90 full time equivalent (FTE) employees. This level will be confirmed after the CIS blueprinting phase is complete and the new business process descriptions are completed to reflect the change in the CIS platform. As this work will be performed in province using Terasen



Gas staff, these positions are being addressed as part of the new COPE collective agreement. This arrangement will provide the greatest flexibility for the Company in designing an operating environment that can be configured to meet changing needs of customers and the Company, while providing cost certainty related to future operating costs in this area.

Facilities

Billing operations will be housed in the primary call centre location in the Lower Mainland. The operational benefits resulting from the close association of these two operating groups is the driver for this decision. Billing operations will provide support to the call centre related to complex billing issues and escalations. In addition, the billing group will be responsible for proactively identifying potential billing issues and contacting customers to discuss and potentially resolve issues before they become escalations to the BCUC or senior management. The location and site assessment criteria for the call centre included the expectation that the primary facility would be required to support billing and back office operations as well as the specific call center requirements. The targeted space requirement for the primary centre is 50,000 square feet. About 40% of this will be used to support billing and back office operations.

Technologies

The primary technology required to support billing operations is the CIS system. This is discussed in detail in section 4.1 of this Amended Application. The functional strength of the SAP CIS application as well as our ability to maintain the application internally and configure changes on site will provide a flexible and cost effective tool to support ongoing changes in response to legislative, regulatory, operational and customer drivers.

The SAP CIS customer solution will also provide a much higher degree of integration with other areas of the Company given the current SAP installed suite. In addition to the operational synergies associated with supporting the new CIS application internally, Terasen will be able to revisit all of the current CIS interfaces between the outsourcer and internal operations to look for efficiencies. All of the current interfaces to SAP will become redundant with an integrated CIS solution and most of the manual handoffs will be able to be automated or improved through process redesign. The value of this integrated solution is described in detail in Section 4.2 of this application.

Strategic Sourcing

Terasen will continue to outsource those business processes that make business and economic sense to outsource. This includes business processes that require high speed, highly automated, large volume transaction processing utilizing specialized equipment or requiring a specific skill set that cannot be developed internally. Section 3 includes a list of those processes that are expected to be outsourced effective January 1, 2012. Over time, as additional outsourcing opportunities are identified, Terasen will continue to evaluate these opportunities to ensure that the services are provided in the most cost-effective manner.

Billing and back office operations for a utility are unique, and through Terasen Gas' and others' experiences, have proven to be not well suited to an outsourcing service model. The complexity of work requires a strong focus on utility knowledge that is built over time. Staff retention is the key to maintaining service quality in this area. The exceptions to this are those high volume



low complexity transactions that require specialized equipment such as statement printing and remittance processing. Terasen is proposing that primary control of billing and back office operations be insourced and supported through the new Lower Mainland call centre location.

2.3.3.2 Billing and Back Office Operations Costs

It is expected that the capital cost to set up billing and back office operations will be \$11.5 million, excluding AFUDC, plus \$2.4 million in deferred O&M. Going forward the annual operating cost, including the cost associated with the ongoing outsourced processes are expected to be \$27.5 million per year.

2.4 Project Schedule

As described earlier, the implementation of the new CIS system is critical to our ability to take over the management of the business processes. Terasen Gas will acquire the facilities and technologies to bring a significant portion of the services outsourced under the current agreement into our ongoing operations. The Company plans to transition the services at the same time as the technology changes are implemented. The planned "go-live" date for both the systems and services is January 1, 2012. A project schedule showing the timing of the completion of the four Project components is provided below.

Project Component	<u>Q4</u> 2009	<u>Q1</u> 2010	<u>Q2</u> 2010	<u>Q3</u> 2010	<u>Q4</u> 2010	<u>Q1</u> 2011	<u>Q2</u> 2011	<u>Q3</u> 2011	<u>Q4</u> 2011	<u>Q1</u> 2012	<u>Q2</u> 2012
1. CIS Software Acquisition <u>Acquisition</u>											
2. CIS Implementation & Maintenance Plan											
Blueprint / Analysis Design & Build											
Integration Test Business Readiness Post Go-Live										* CIS Go-Live	e Jan 1, 2012
3. Call Centre Implementation											
Facilities Acquisition Leasehold Improvements											
Infrastructure Implementation Technology Implementation								* Call Centre	Facilities Con	nplete Jun 30,	2011
Training											
4. Billing & Back Office Implementation Facilities Acquisition											
Leasehold Improvements Infrastructure Implementation											
Recruit & Hire Training											

Table 2.3: Customer Care Project Completion Timetable



2.4.1 Timing of CIS Software Acquisition

All software acquisition details have been confirmed with the various vendors. Once the approval of the project has been confirmed, the acquisition is a one time event

2.4.2 Timing of CIS Hardware Implementation & Implementation Plan

The implementation of the CIS system is scheduled to last for 22 months from Project initiation to go-live. It is anticipated that there will be a three month "stabilization" period after the go-live planned for January 1, 2012, where minor adjustments and previously undetected errors will be addressed. The implementation plan consists of six phases. A high-level description of each phase is outlined below that spans the acquisition of the CIS software to its implementation and go-live:

2.4.2.1.1 Phase 1 – Plan

This phase is scheduled to start in March 2010 and be two months in duration. In this phase, project facilities are established, equipment is ordered, the project is staffed and the team is trained in project methodology and tools.

2.4.2.1.2 Phase 2 – Blueprint / Analysis

This phase is scheduled to start in May 2010 and run for six months in duration. During this phase, all functional requirements are detailed into functional and technical specifications, all reports are identified and estimated, data conversion, testing, training, and change management strategies are defined and all initially planned efforts are validated.

2.4.2.1.3 Phase 3 – Design & Build

This phase is scheduled to start in November 2010 and run for seven months. In this phase all configuration, development of reports, interfaces, and data conversion programs are developed and unit tested. Unit testing is the practice of validating that each individual component developed works to specifications.

2.4.2.1.4 Phase 4 – Integration Testing

This phase is scheduled to begin in June 2011 and has a five month duration. During this phase, all of the components that were developed and individually tested in the previous phase are brought together and run end-to-end to validate the overall business outcomes. Also in this phase, full data conversions are tested and the overall cutover planning is detailed. Training material and system documentation is also developed and training plans are established.


2.4.2.1.5 Phase 5 – Business Readiness

This phase is scheduled to start in November 2011 and run two months in duration. In this phase, User Acceptance Testing is completed, all end user training is conducted, dress rehearsals for cutover are executed, and post go-live stabilization processes are detailed. This phase culminates with the go-live of the new CIS.

2.4.2.1.6 Phase 5 – Post Go-live Stabilization

During this phase, support resources from the implementation project are in place to support any issues or errors that occur after the system goes live. The duration of this period is dependent upon how quickly the system performs to the original specifications, how closely the original specifications aligned with actual business processes and is also a factor of testing quality.

For details regarding the depth of what was requested of the System Integrator for the execution of the above plan, see RFQ for CIS SI in Appendix "E".

2.4.3 Timing of Call Centre Implementation

The facilities set up related to the insourced call centres is on the critical path. In order to be ready to support call centre operations on January 1, 2012, the facilities are required to be ready to provide housing for the new technologies as well as space to recruit and train the new staff. The technologies will be implemented in early 2011, and will be ready by mid-year to be available for training. Staff recruiting will start in the second quarter of 2011, and training will start in the third quarter and will run to December 31, 2011, just prior to go-live.

2.4.4 Billing and Back Office Implementation

The facilities set up related to the insourced billing and back office operations are shared with the Lower Mainland call centre facility and will be addressed together. In order to be ready to support billing and back office operations on January 1, 2012, the facilities are required to be ready to provide housing for the new technologies as well as space to recruit and train the new staff. The primary technology for use by the back office will be the new SAP CIS. Staff recruiting will start in the second quarter of 2011 and training will start in the third quarter and will run to December 31, 2011, just prior to go-live.

2.5 **Project Risks and Mitigation**

Terasen Gas has reviewed the scope of changes that need to be made in support of this initiative and has developed a plan appropriate for implementing the Customer Care Enhancement Project. For each project component, Terasen Gas has identified the key areas of focus to ensure appropriate risk mitigation efforts are in place for the overall Project implementation. A risk and mitigation summary follows for each component. As part of



Terasen's standards for a project of this magnitude, a detailed risk register will be one of the first deliverables of the planning phase of the Project.

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<u>Risk</u>	Mitigation
SAP software proposal only valid until Dec 15 th 2009.	The quotation for the cost of the SAP IS-U/CC&B software is a fixed price in Canadian funds valid until Dec 15, 2009. SAP was aware that no commitment could be made until regulatory approval over which Terasen Gas has no control. Software companies are very sensitive to fiscal year targets and price software accordingly. Given the current economic situation, Terasen Gas received very favourable pricing but recognized that if the decision process stretched over a fiscal year for SAP (SAP's fiscal year is Jan – Dec), that a new cost proposal was possible. Terasen Gas took that consideration into account when determining the overall project budget and has incorporated as part of the contingency the amount associated with the acquisition of SAP software should the decision date extend into 2010 and detailed negotiations result in a change in the original proposal from SAP.
SAP software deficient in meeting requirements	Terasen Gas undertook an extensive evaluation exercise bolstered by independent research to come to the choice of SAP. Refer to Section 4.1 and Appendix C for details on the evaluation process.

Table 2.5: CIS Im	plementation ar	nd Maintenance -	Risks and Mitigation

<u>Risk</u>	<u>Mitigation</u>
Schedule – Project Duration	Project management will focus on strict control of scope and deliverables to ensure the schedule is maintained.
	There will be a rigorous change control process in place to ensure any changes to the scope from the original requirements are vetted appropriately to ensure that there will not be an adverse impact on schedule.
	The overall Project schedule has incorporated lessons learned from information gathered through industry forums such as conferences, presentations and reference calls to other companies that have implemented similar software and reflects appropriate time allowances for the various phases of the Project as highlighted above in section 2.4.2.
Resources – Implementation	The System Integrator has been identified through a rigorous and thorough RFQ process to ensure Terasen Gas has an experienced and committed



	implementation team which is anticipating a March 1, 2010, start date with a January 1, 2012, go-live date.							
Resources – Maintenance	SAP Quality Assurance and system architecture resources have been identified and committed to by the Vendor.							
	Terasen Gas intends to manage the ongoing maintenance of the proposed platform with internal resources. It is the Company's intent to hire the supplemental 10 resources it is projecting that will be required as early in the project as possible. This is to allow for maximum involvement in all of the design, build, test, training and documentation of the new CIS platform to facilitate a smooth and timely transition to ongoing sustainment. Terasen also has experience in bringing on resources later into a project that are designated as ongoing sustainment. This ensures that a delay due to a challenge in finding the right resources can be accommodated. If the delay is prolonged, Terasen has a plan in place to keep some key system integrator resources beyond the planned three month stabilization period in the unlikely event Terasen Gas will require additional external support until it becomes self-sufficient.							
Cost	The proposal from HCL Axon is fixed price with payments based on project deliverables.							
	Terasen has identified billing rates for all identified resources required to supplement the system integrator resources. The roles of these supplemental resources and their expected duration on the project is well understood and budgeted for. For an overview of the specific areas that Terasen Gas will utilize additional third party resources, refer to section 2.3.1.2.1.2							
	There will be a rigorous change control process in place to ensure that any changes to the scope from the original requirements are vetted appropriately to minimize the potential for there to be an adverse impact on cost.							
	Terasen has provided for what it believes is an appropriate contingency for a project of this size, scope and complexity.							



Table 2.6: Call	Centre - Risk	s and Mitigation
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<u>Risk</u>	<u>Mitigation</u>
Schedule	An experienced project manager will be appointed to focus on strict control of scope and deliverables to ensure the schedule is maintained.
	There will be a rigorous change control process in place to ensure any changes to the scope from the original requirements are vetted appropriately to ensure that there will not be an adverse impact on schedule.
Resources	Location evaluations included an assessment of workforce availability.
	A detailed recruiting approach and schedule will be completed after the Commission's decision on this Application is issued.
	Training programs will be designed to incorporate both application and industry specific knowledge.
Facilities	Currently available facilities that meet requirements in desired locations have been identified.
	Facility preparation project management will focus on scope and deliverable control to ensure the facility schedule is maintained to support hiring and training staff and support the technical infrastructure of the new technologies as and when required.
Cost	The proposal from Aspect Software Inc., the selected provider of the call centre technology suite, is fixed price with payments based on project deliverables for the technical implementation of the call centre solution.
	There will be a rigorous change control process in place to ensure any changes to the scope from the original call centre requirements are vetted appropriately.
	Staffing costs have been confirmed through the negotiation of a collective agreement with COPE that reflects competitive pricing for similar work.
	Terasen has provided for what it believes is an appropriate contingency for a Project of this size, scope and complexity.
	In the process for determining the costs to implement the Customer Care Enhancement Project, Terasen Gas requested vendors to quote in Canadian funds where they had operations based in Canada and from where they will source key inputs, and in US funds where they were based in the United States and from where they will source other key inputs. Once approval is received from the Commission to proceed with the Project, Terasen Gas will develop, if appropriate or feasible, a currency hedge for managing potential foreign exchange risk the Project faces.



<u>Risk</u>	Mitigation
Schedule	An experienced project manager will be appointed to focus on strict control of scope and deliverables to ensure the schedule is maintained.
	There will be a rigorous change control process in place to ensure any changes to the scope from the original requirements are vetted appropriately.
Resources	Location evaluations included an assessment of workforce availability.
	A detailed recruiting approach and schedule will be completed after the Commission decision with respect to the application is provided.
	Training programs will be designed to incorporate both application and industry specific knowledge.
Facilities	Currently available facilities that meet requirements in desired locations have been identified.
	Facility preparation project management will focus on scope and deliverable control to ensure the facility schedule is maintained to support hiring and training staff and support the technical infrastructure of the new technologies as and when required.
Cost	Billing operations relies primarily on the CIS application discussed above.
	Staffing costs have been confirmed through the negotiation of a collective agreement with COPE that reflects competitive pricing for similar work.

2.6 Preliminary Impact Assessment

The Project will not have any negative impacts on the physical, biological or social environment. It will not have any potential impact on aboriginal rights and title.



3. Project Justification: Drivers for Change

Terasen Gas believes that the Customer Care Enhancement Project, including the insourcing of key elements of the customer care function and the supporting SAP CIS platform, is in the best interests of its customers and the Company. The Project is the culmination of Terasen Gas' review of its customer care function, prompted by three interrelated drivers. The drivers are:

- 1. The business environment and regulated energy marketplace that Terasen Gas operates in has changed since 2002 and will continue to change in the future;
- Customer service is a long term critical success factor and in response to changing customer expectations and enabling technologies, customer care has advanced across industries;
- 3. The utility outsourcing market has evolved since 2002 and has moved toward Strategic Sourcing models such as the model contemplated in this Application.

Each of these interrelated drivers is described in the following subsections. The Project, once implemented in January 2012, will provide Terasen Gas with the flexibility to manage its customer care service activities in a manner that can best meet the evolving needs of customers going forward.

3.1 The Company's Evolving Business Environment

Terasen Gas' business environment has changed considerably since 2002 and continues to evolve. Government energy policy is leading to a more complex energy marketplace, including new customer programs and information needs. Terasen Gas also faces competitive challenges in the B.C. marketplace due to the differing nature of how natural gas and electricity costs are set into customer rates and customers' changing perceptions about how the use of natural gas contributes to climate change. This Project will best position Terasen Gas customer care delivery functions to support the types of changes resulting from government policy and the competitive environment.

In this section, we will first discuss the changing energy marketplace and policy environment, followed by a discussion of how the Project will permit TGI to better meet these changes.

3.1.1 Evolving Policy Environment

In recent years B.C.'s provincial government and municipalities have taken steps to develop targets and action plans to support the reduction in greenhouse gas ("GHG") emissions. The actions of Canada's federal government, while not (yet) reflected in formal policy, reinforce this focus on cutting GHG emissions while reducing consumption of carbon based fuels. With the recent changes in the federal government of the United States, there is a renewed commitment to clean energy and GHG reduction.³ Thus, all levels of government across North America recognize that GHG reduction is a pressing reality.

³ On May 15, 2009 U.S. House Energy and Commerce Committee Chairman Henry Waxman and House Energy and Environment Subcommittee Chairman Edward Markey introduced H.R. 2454, The American Clean Energy and Security Act ("ACESA"), which calls for an economy-wide GHG cap and trade system and other complementary GHG reduction measures.



British Columbia's provincial government has committed to addressing issues of climate change and energy efficiency. Government policy has placed public utilities such as Terasen Gas in a position of having a direct role in addressing climate change. With the publication of the Energy Plan in 2007 and amendments to the *Utilities Commission Act* in 2008, the Provincial government is targeting the broader implementation of clean, alternative energy, the increasingly efficient use of traditional energy sources, and a reduction in carbon emissions when sources that produce carbon emissions are used. The recent throne speech reiterates the B.C. government's commitment to addressing climate change and GHG emissions.

Climate change and energy consumption are subjects of enormous importance to British Columbians today and into the future. The public has accepted that GHGs contribute to climate change and that action must be taken. TGI supports sustainability initiatives through its Energy Efficiency and Conservation (EEC) programs and in its own operations. There is nevertheless an important role for natural gas in the long-term sustainability picture due to the advantages inherent in its physical properties, i.e. lowest emissions of the fossil fuels, no/low particulate matter, etc. Consumers also want clean air and affordable comfort, in addition to carbon reductions, all of which are areas where natural gas provides benefits. Natural gas will continue to be the right choice for many consumers, and its use should be encouraged where it is the right energy form for the right application at the right time given its relative stage of commercial and technological development.

Terasen Gas is committed to being part of the solution by ensuring customers have access to the energy they need while also promoting energy efficiency and conservation. Terasen Gas also recognizes that these laudable objectives and goals represent challenges to the Company's traditional natural gas business. It is thus important for Terasen Gas to undertake and explore new initiatives that support government policy while at the same time helping our customers find energy solutions that meet their changing needs. In fact, energy policy calls upon utilities to play an integral role in doing this very thing.⁴ There are opportunities for the use of other non-traditional energy sources, both in conjunction with natural gas and on their own. There are opportunities for TGI to be a provider of energy solutions beyond just natural gas. Indeed, TGI considers it to be vital that we become a provider of diverse energy solutions for customers.

The 2007 Energy Plan sets out a strategy for making the province energy self-sufficient and reducing carbon emissions. The new emphasis on climate change presents both obligations and opportunities for Terasen Gas to be a leader in assisting our customers to address these challenges. The Plan cites conservation, energy efficiency, and clean energy as key elements to help realize these objectives. It also contemplates that the use of advanced metering offers the potential for providing consumption information to consumers so that they are placed in a better position to conserve energy and make decisions concerning energy efficiency alternatives.

Terasen Gas is working to further develop and expand its role in supporting the Energy Plan and its responsibility for designing and developing programs to help its customers. Terasen

⁴ For example, BC Energy Plan: A Vision for Clean Energy Leadership, Policy #3 (Encourage utilities to pursue cost effective and competitive demand side management opportunities) and Policy #4 (Explore with B.C. utilities new rate structures that encourage energy efficiency and conservation) are policy objectives that give direction to the roles that utilities need to play.



Gas intends to implement a number of new initiatives that are aimed at providing customers with a range of energy solutions that are consistent with evolving government policy and public perception. In order to support our customers and be successful in the future, Terasen Gas must be able to implement both operational and technological change. This Project will support Terasen Gas in meeting those objectives in the manner described in section 3.1.3 below.

3.1.2 Evolving Competitive Environment

Terasen Gas also faces a changing competitive environment as the Company's competitive position relative to peers and competitors continues to decline, presenting further challenges that the Company must address.

Historically, consumers have made purchase decisions about what energy supply source they are willing to buy based on a number of variables including the cost of product, ease of use, and reliability. In addition to these historical decision criteria, the provincial GHG reduction targets have the potential to adversely change people's perception of natural gas over the long term. The targets may shift investment and consumption decisions of the consumer away from natural gas towards the consumption of electricity or other renewable energy alternatives (such as solar and geothermal).

Thus, direct use of natural gas for certain applications must overcome two hurdles before the buyer will make a commitment to investing in natural gas equipment. One is the economic hurdle, comparing the historical and future natural gas operating costs and capital costs versus the competitive alternative. The second hurdle that needs to be overcome is related to the "green" perception of a product and how that product helps in the climate change challenge.

The gradual erosion of natural gas' cost advantage in B.C. over electricity impacts TGI's growth in new customer additions, and also impacts existing customers' throughput levels. Natural gas market prices have improved relative to other energy commodities (such as oil) in the North American marketplace, but natural gas faces challenges in the B.C. marketplace due to the differing nature of how natural gas and electricity costs are reflected in rates. Increases in natural gas prices incent customers to reduce their energy consumption or look for cheaper alternatives to meet their energy needs. Both cases lead to reduced consumption levels on the natural gas system which negatively impacts existing customers' rates, all else being equal.

In situations such as those described above, where consumer's behaviour is driven primarily by price, companies move away from competing on price, and toward alternative methods of building customer value.

One method is to deliver a high level of customer service. In order to meet this objective, companies are focusing their efforts in developing contact centre solutions that will differentiate themselves through service excellence.

In addition, companies who once outsourced their customer service operations are rethinking this strategy, resulting in a trend towards insourcing (see 3.1), as customer service becomes a strategic asset for companies in the retention and attraction of customers. Ensuring company representatives understand the company's operating environment, including regionally specific



issues, and are well versed in addressing their operating context, is an important element of this strategic shift.

Terasen Gas' long-term success in the B.C. energy market rests in part on the ability to transform its customer service function into a strategic asset, which is best accomplished through insourced Terasen-owned capabilities.

An additional challenge Terasen Gas anticipates in the future occurs as a result of Provincial government policy regarding advanced metering, discussed earlier. BC Hydro is expected to move toward a fully functional smart metering solution by the end of 2012, which at this point does not accommodate support for a parallel gas read through the same infrastructure. Terasen Gas expects to be faced with the challenge of a stand-alone manual natural gas read as BC Hydro moves away from the joint manual read that is in place today.

The Company will also be faced with the challenge of not being able to provide customers with consumption information like that which BC Hydro will enable through their metering initiative. This will create a competitive challenge for TGI. Terasen Gas intends to continue with manual meter reading to continue to take advantage of the cost benefits associated with the joint gas / electric read for as long as that option is available. However, Terasen Gas would expect to bring forward a technology project in the near term once BC Hydro has confirmed its plans to move forward with its smart metering initiative.

Terasen Gas must respond to its changing competitive environment in order to maintain a strong competitive position and ensure long term success for the benefit of customers and the Company. A discussion of how this Project will support Terasen Gas in addressing change in the business environment is below.

3.1.3 The Project Will Help TGI Respond to the Evolving Business Environment

The changes in Terasen Gas' business environment outlined above have had a direct effect on our customer care function and give rise to specific requirements such as:

- A CIS platform that can efficiently incorporate new products and services;
- Representatives that understand regional issues and their implications when working with customers; and
- The ability, from the perspective of both billing/tracking technology and qualified human resources, to provide customers with more information regarding their energy use and actions they can take to change their consumption.

These requirements are addressed immediately below. The proposed CIS platform and new customer care delivery model will position Terasen Gas to more effectively implement new programs, communicate information and opportunities to customers, and implement billing and customer program changes much more quickly and cost effectively.

3.1.3.1 Customer Information System

The implementation of new energy programs and solutions for customers requires a CIS system that includes capabilities to introduce and modify these programs. As CIS systems for utilities have evolved from "custom-built" to "commercial off the shelf" solutions (this distinction is



discussed in detail in Section 4.1), newer systems offer broader capabilities in recognition of change in the marketplace and the requirements of organizations to utilize systems that can respond effectively to that change in a cost effective manner. In the past, custom built systems were designed for a particular point in time based on the software and hardware technologies of the time. Adapting to the broad marketplace change that has occurred was not necessarily envisioned, making change implementation challenging and lengthy.

Newer customer information systems have more inherent functionality. They are designed using more current technologies that allow for much greater onsite configuration capabilities, which make modifications easier and faster to execute. These technologies will support more timely and cost effective changes, such as the addition of new products, programs or services and mandated revisions including new taxes or tax rate adjustments. Looking forward, the market-leading developers of these applications have demonstrated their commitment to investment in product development and we anticipate they will continue to do so in the future to meet the needs of the evolving business environment.

As discussed earlier, government policy has placed public utilities such as Terasen Gas in a position of having a direct role in addressing climate change. Policy change has also driven changes in the Company's billing area. For example, over the past five years, Terasen Gas has implemented billing and reporting requirements related to the commercial and residential Customer Choice programs. Additionally, we have implemented the Innovative Clean Energy Levy in 2007 and the Carbon Tax in 2008. The applicability and design of both of these taxes was challenging to implement within the current CIS and included incremental costs for each implementation. While these examples have already been implemented, we anticipate future additional billing and reporting change in support of the policy direction such as the implementation of new Energy Efficiency and Conservation programs. Terasen Gas is also expecting the evolution and expansion of Customer Choice to currently non-qualifying service areas. These changes will be more effectively addressed with the new CIS.

Government policy also contemplates that the use of advanced metering offers the potential for consumers to better understand their energy use so that they are placed in a better position to conserve energy and make decisions concerning energy efficiency alternatives. Terasen Gas is also intending to provide integrated alternative energy solutions including biogas, solar, thermal, geo-exchange and district energy systems. Through implementing the new CIS with the broad capabilities that are included in its basic functionality, and creating an internal customer care delivery organization, this Project will position Terasen Gas to best respond and adapt in a timely and cost-effective manner as additional initiatives are undertaken.

With a current and market leading CIS solution, TGI will be better positioned to offer customers the information and programs they require as a result of our evolving and increasingly competitive external environment.

3.1.3.2 Customer Care Delivery Model

Terasen Gas' current Business Process Outsourcing customer care operating model, with front line customer care representatives employed by Accenture in New Brunswick, Ontario and Oregon and most billing work performed in offshore locations, limits the ability for representatives to internalize regional issues and understanding when working with customers. Regardless of the amount of training provided, it is difficult for representatives to relate to



customer experiences and the particulars of regional factors if they have no direct regional experience or knowledge to draw on. TGI has found through the duration of the Client Services Agreement with CustomerWorks LP that a great deal of change has taken place within the contractor's organization, including a significant relocation of work over time. While service levels generally meet the minimal contractual requirements, staff turnover has lead to a significant degradation in gas industry and end to end business process knowledge as a consequence of these changes. As a result of this decline, preventable errors occur that drive additional customer inquiries and complaints and can take a significant effort to correct.

Through an internally managed customer care organization based in British Columbia, the employee representatives of Terasen Gas will have improved knowledge of our broader environment and the impact of events in our marketplace in order to better understand and relate to customer experiences. The Company will also have ownership of employee selection and training and will be able to more effectively enhance the customer-focused culture at Terasen Gas. Direct ownership and oversight of employee training will ensure that customers can access the information they need from knowledgeable representatives.

The flexibility in the new model will facilitate our ability to adapt our customer care and billing operations in response to changes in the external environment. For example, we will have the ability to quickly and effectively create specialized representative groups as required to provide detailed energy efficiency knowledge or new product and service information to customers. These will be effective in cases where particular detailed needs exist that are best met through a core team rather than the broad base of customer service representatives.

A customer care delivery model with direct Terasen Gas ownership and operational oversight will also better position the Company to respond to competitive factors. Representatives will have the appropriate regional context to draw on when addressing competitive alternatives in their work with customers. Additional discussion regarding Call Centre and Billing and Back Office Operations staffing is included in Sections 4.3 and 4.4.

The Project is an important step for TGI in responding to the evolving external situation described above.

3.2 The Importance of Customer Service and the Role of the Customer Care Function

As the energy marketplace becomes more complex, Terasen Gas must ensure that it maintains the loyalty of existing customers and is positioned to attract new customers. This requires being able to provide appropriate levels of customer service going forward that reflect evolving customer expectations. The customer care function is the key point of interaction between the Company and its customers. To best provide these services and deliver strong customer care. The Project will accomplish this objective in a cost effective manner.

The following sections discuss the evolution of customer service and customer expectations regarding the service they receive and how the Project positions TGI to respond to changing customer needs.



3.2.1 Customer Service is a Critical Success Factor

Terasen Gas competes for customers in an increasingly diverse energy marketplace. Customer satisfaction and loyalty are important factors to ensure that TGI is positioned to retain and attract customers. The customer service experience is a critical factor in the overall value proposition.

Existing and future customers benefit from investment in the customer service function that permits TGI to retain and attract customers. A growing customer base allows the Company's fixed costs to be spread across a larger number of customers, thus reducing customer rates, all else being equal.

Terasen Gas' reputation depends on the consistent delivery of service excellence. The Company's long term success can be expected to be adversely impacted by negative customer experiences. Difficulties experienced under the current outsourcing arrangement as they relate to the provision of service to our customers (see Section 3.3.3) can have longer term consequences that are of greater significance than might be suggested by any contractual performance penalties awarded to Terasen Gas.

3.2.2 Evolution of Customer Service

Customer service has evolved in importance and complexity over time. Organizations looking to provide service excellence as a means of competitive differentiation have changed their customer service structures and channels to maintain best practice delivery to customers.

For many years, the telephone customer service channel has been central in an organization's provision of service to customers. Advances in this channel have been enabled by technological progression over time and the centres previously referred to as "call centres" are now moving to being called "contact centres". As noted in a report prepared by The Taylor Reach Group for Terasen Gas (Appendix M), "although throughout the years the name has changed...the main purpose has always been the same; to communicate with customers in an effective and efficient manner. The name change is simply more reflective of the tools and the technologies being employed in these centres. At the same time new technologies have evolved and today allow organizations and more specifically their contact centres to take a larger role in understanding and responding to customer needs."⁵

Accompanying technological change is the evolution of processes and procedures that are considered standard for contact centres and the development of best practices as seen in leading centres. The Taylor Reach Group report identified seven best practices related to the use of electronic media that best in class organizations provide for customers. As described in the report these include:

⁵ Toward a Multi-Channel Contact Centre, Email and Chat: Emerging Contact Centre Technologies. Prepared for Terasen Gas by The Taylor Reach Group, Inc. August 2009.



Communication Options

Best in class organizations provide their customers with several communication options/channels and allow them to select and use their preferred method of communication.

Single Point of Contact

Simple and easy to find points of contact are provided for customers. All contacts are handled through one integrated system. The system directs all incoming communications (web chat, email, voice call) to the appropriate staff regardless of the media being used.

Access Choices – 24/7 Service

Communication options that allow customers to contact companies at any time.

Exceptional Service Levels across Channels

Service levels are set at targets that meet and exceed customer expectations. Staff are scheduled to ensure service level targets are met. Targets are reached 95% of the time at best in class contact centres.

Value Add Applications

Customers are offered value-add self serve applications through IVR ("Integrated Voice Response") and web channels.

First Contact Resolution

Priority is placed on resolving customer issues with the first contact regardless of contact channel. Processes, staff training and supporting technologies are designed to achieve high first contact resolution results (90% for best in class centres).⁶

The above best practices are key outcomes of contact centre evolution from the 1970's to today as a result of technological advances in business and for consumers. The growth of the internet and other consumer technologies has changed customer actions and expectations. For companies to meet these expectations as part of maintaining their competitive position, they must respond to changing needs and provide customers with the service delivery they value. Additional discussion regarding customer expectations in relation to customer service delivery follows.

⁶ Toward a Multi-Channel Contact Centre, Email and Chat: Emerging Contact Centre Technologies. Prepared for Terasen Gas by The Taylor Reach Group, Inc. August 2009.



3.2.3 Customer Expectations Regarding Customer Service Delivery

Through market research and customer feedback, our customers have told us that we must be able to consistently:

- Offer a range of interaction options;
- Offer billing and payment alternatives;
- Provide additional product and service options in response to customer needs;
- Manage customer communications related to outages or restoring service following an outage;
- Provide timely and accurate meter reading data to support billing and address customer concerns; and
- Ensure representatives have appropriate product and service knowledge and regional awareness in order to understand and relate to customer needs and experiences.

Customer expectations of Terasen Gas are influenced in part by their direct experience with the Company. They are also influenced by experiences with other organizations, including other energy companies, and other industries such as telecommunications, cable and financial services. These customer interactions with other service providers establish what the customers view as acceptable levels of service and billing options. As a result, Terasen Gas must acknowledge and understand other organizations' customer service models, especially where a successful adaptation to market evolution in meeting customer expectations is demonstrated. In many cases, this means that energy utilities such as Terasen Gas must look outside their own industry in order to understand different responses to competitive challenges⁷ and to model their activities for the future. In order for customer care delivery at Terasen Gas to meet evolving customer requirements, the Company must ensure that service offerings are comparable and that quality stands in line with or above others.

More importantly, customer service requirements have changed and will continue to change over time. In 2008, Ipsos-Reid conducted seven focus groups on behalf of Terasen Gas to explore customer needs and expectations. Following these focus groups, in early 2009, Angus Reid Strategies conducted a survey of over 800 Terasen Gas customers to understand customer expectations and preferences related to telephone and online services. Results of these studies are included in Appendix E and Appendix F. From these studies, Terasen Gas understands that its customers prefer to conduct business with companies depending on their own schedules and through their preferred communication channels.

With today's continuing expansion of communication channels, customer preferences for interacting with service providers are shifting. A study conducted by Convergys in the U.S. found customers "preferring automated channels have doubled in the last four years, with 55% of the population preferring automated resolution to waiting to speak with someone on the

⁷ Terwilliger, C. & Lu, F. (2004). Getting utility customers to use online services. E–Source. EBiz-F-14.



phone."⁸ While our customers' preferred method for interacting with the Company today continues to be reaching a live agent (first choice for 31%), this is followed by 24% of customers whose first preference is to interact with Terasen Gas via the Company's website.

Shifting communication channel preferences are supported by more than technological change. The arrival of the "millennial" generation into adulthood is driving a major shift in customer expectations. According to Convergys, "millennials are 43% more likely to seek assistance through their preferred automated channels. For millennials, online interaction is ingrained. They see value in social networks, perceive needs through viral communications with colleagues and order and pay through the web. They want their service needs handled the same way."⁹ This generation currently represents approximately 20% of British Columbia's population and approximately 8% of the Terasen Gas customer base. Over time, we expect that this proportion will grow and anticipate that generations following the millennials will have at least a similar, if not stronger preference for online rather than telephone interaction.

A study conducted by KRC Research to investigate millennial generation attitudes towards technology and the internet, expectations and considerations related to the professional workplace, and perspectives on the insurance industry found that online technology to better serve customers is a priority among millennials. Eighty-nine percent felt insurance companies should adopt web-based support for customers, 86% believe it is important to offer web portals with complete account views, and 76% felt live online chat with agents is important to offer.¹⁰ These results indicate the preferences of the millennial generation that can be applied across other industries, including utilities.

Companies are responding to changing customer preferences. For instance, customers in British Columbia can chat online with a TELUS agent and access a variety of online TELUS services, while Shaw offers an online "move" service. For more information regarding these services, see: https://www.telus.com/unprotected/login.do and

http://www.shaw.ca/en-ca/CustomerCare/BillingSupport/ShawEasyMove.htm.

In a utilities industry call centre benchmark report published by Benchmark Portal (Appendix N), it is noted that "the focus has shifted from a singular point-of-contact via telephone calls to multiple points of customer access"¹¹. The report also notes that more than half of the utility call centres within the study are integrated with other customer communication channels. This integration is the "Single Point of Contact" best practice referenced earlier. Our customers also expect Terasen Gas to offer a variety of service options through telephone and online communication channels, including self-service transactional capabilities, to address account issues and information requests.

⁹ Ayers, Andrea. (2009). Executives Have No Idea What Customers Want. Forbes.com. http://www.forbes.com/2009/03/10/consumers-executives-disconnect-leadership-managingconvergys.html.

⁸ Avers, Andrea. (2009). Executives Have No Idea What Customers Want. Forbes.com. http://www.forbes.com/2009/03/10/consumers-executives-disconnect-leadership-managingconvergys.html.

¹⁰ KRC Research. (2008). Insurity/Microsoft "Millennials in Insurance Survey 2008".

¹¹ Anton, Jon. (2009). Utilities Industry Benchmark Report Best in Class Call Center Performance. P 3.



It was reported in 2000 that two thirds of all utility customer call centre transactions fall into the following categories: transfer service or turn service on/off, check account balances, and to make special arrangements to pay account balances¹². Just over 50% of Terasen Gas call centre transactions fall into these categories today, which represents a material shift. Organizations have moved to providing additional channels and customers expect these options. For example, the Angus Reid Strategies study identified that over 85% of Terasen Gas customers expect to have the ability to start, stop or transfer their service using the Company's online channel. The study also indicates a high expectation among TGI customers to understand their natural gas consumption and home energy use. When questioned about the potential of introducing automated meter reading and their willingness to pay for the service, approximately one third of respondents are willing to pay extra for enhanced consumption information. This initial level of acceptance is a favourable result representing the initial adopting market segments typically seen as innovative products or services are introduced.

Today, Terasen Gas receives approximately 1.3 million inbound calls per year at call centres in New Brunswick, Ontario and Oregon. Inbound call volumes have been relatively stable over the past three years although there has been a shift to other communication channels such as email. More customers are using the web as their preferred method of communicating with the Company rather than the more traditional phone channel. Terasen Gas is currently limited in the options that we offer customers for conducting business through online channels. Customers are able to view statements and some account information, however transactions such as account information updates, moves, or closing an account are not provided. This Project will enable improved offerings in this area.

3.2.4 The Project Will Help TGI Address Evolving Customer Expectations

Changing customer expectations have a direct effect on our customer care function. To continue to provide customers with a level of service that they value, Terasen Gas must:

- 1. Provide customers with the options they desire to use to interact with the Company;
- 2. Facilitate their billing and payments choices;
- 3. Provide knowledge and expertise related to energy conservation and the B.C. energy marketplace.

The first two points are addressed through the customer information system, and the third is driven by the customer care model. Below we address the role of the CIS and the customer care model in addressing evolving customer expectations.

3.2.4.1 Customer Information System and Contact Centre Technologies

With customers increasingly using non-traditional contact channels, newer CIS applications and contact centre technologies have included functionality to meet these types of customer expectations as part of their base system. These capabilities can be enabled at the option of the utility to facilitate the implementation and ongoing support of alternative contact channels such as IVR and web applications. Today, the Company's service offerings via alternative channels are limited and as discussed earlier, do not meet customer expectations. TGI's new

¹² Gogel, F. & Boys, M. (2000). Internet customer care. E-Source. Utility Customer Care Series. UCC -2.



CIS and contact centre technologies will allow the Company to cost-effectively improve transactional capabilities through alternative channels to better meet customer expectations. These new capabilities will be available at implementation and will be introduced as opportunities are identified or as customer demand for these alternatives increases.

Utilities that embrace the trend to offer customers self-directed transactional capabilities by integrating technology and self-service will be better positioned to build customer satisfaction and loyalty. Terasen Gas anticipates that integrating additional communication channels and broader self-service options will result in a contact centre that is effective in delivering customer service that is cost-effective for customers and the organization.

Taylor Reach Group observed in its 2009 report for Terasen Gas: "Contact centres are now in position to offer multi-channel media to their customers. The emerging technologies allow management to distribute the work load among their staff with ease regardless of the communication method or channel being used by customers while adhering to their quality standards for customer service. By doing so contact centres can also use the opportunity to increase their efficiency, lower the costs while improving customer satisfaction. In addition by offering more and more self serve options (building on customers' preference for self serve) contact centres can dedicate additional resources to focus on customer relationship management."¹³

The implementation of the new CIS application and current contact centre technologies will enable Terasen Gas to bring the benefits of multi-channel capabilities to our customers.

3.2.4.2 Customer Care Delivery Model

We also believe that ensuring representatives have appropriate product and service knowledge combined with regional understanding is an important customer service factor. This will ensure representatives can relate to customer needs and experiences and apply that understanding when working with customers.

With direct ownership of representative training and ongoing management, we will have the ability to build key knowledge and understanding within our representatives that will give them the tools to apply appropriate judgement when working to address a customer inquiry or concern.

Customer service is a strategic asset for companies in the retention and attraction of customers. Through this model, we will be positioned to support our long term success in the B.C. energy marketplace by differentiating TGI through customer service and transforming the customer service function into a strategic asset, which is best created through Terasen Gas owned and managed capabilities.

¹³ Toward a Multi-Channel Contact Centre, Email and Chat: Emerging Contact Centre Technologies. Prepared for Terasen Gas by The Taylor Reach Group, Inc. August 2009.



3.2.4.3 Balancing Customer Service and Rate Impact

At Terasen Gas, we recognize and understand that our customer base is varied. Service elements that are meaningful and important to a certain segment of customers may not meet the unique needs of another segment or individual. Our focus is to meet the needs of our various customer groups cost effectively and ensure we are positioned to respond as those needs change over time.

Our objective is to be in a position to offer a broader range of customer interactions in the near term and to be able to modify those interactions more easily and cost effectively as customer demographic shifts over time. This Project will support achieving this objective through the capabilities of the new CIS and contact centre technologies and the flexibility inherent in the model following our strategic shift to the new customer care delivery model.

3.3 Evolution of the Outsourcing Market and Recommendations of UtiliPoint

At the outset of Section 3, we described how the Project is the culmination of Terasen Gas' review of its customer care function, prompted by three interrelated drivers. This section addresses the third driver: the evolution of the utility outsourcing market since 2002, which is when Terasen Gas became an early adopter of Business Process Outsourcing. The early adopters of BPO outsourcing in the utilities industry are now revisiting their arrangements and many are moving toward a Strategic Sourcing model such as the model applied for in this filing. The comprehensive Business Process Outsourcing (BPO) model employed by Terasen Gas since 2002 evolved in response to a need on the part of utilities to minimize the risks associated with significant technical and operational changes or expansions and to secure greater cost certainty or stability of future operating costs. BPO providers entering the marketplace, such as CustomerWorks LP, did so through the acquisition of resources and systems provided by the outsourcing utility clients. Eight years later, current and renegotiated outsourcing arrangements tend to be more targeted Strategic Sourcing models. UtiliPoint, an expert in outsourcing, has recommended a Strategic Sourcing model for TGI at this time, citing many of the same reasons other utilities have cited for moving in this direction.

This section begins with a discussion of the evolution of the outsourcing industry away from the comprehensive Business Process Outsourcing model towards Strategic Sourcing, as proposed by TGI in this Application. This is followed by an overview of UtiliPoint's recommendations for Strategic Sourcing for TGI, which are being implemented by TGI. The section concludes by describing the ongoing performance challenges resulting from Terasen Gas' long-term outsourcing arrangement with CustomerWorks LP.

3.3.1 Evolution of Customer Care

Although BPO continues in the utility industry, it has not experienced the rapid adoption that was forecast five or ten years ago. The broad BPO model, while attractive in the early 2000s when Terasen Gas was an early adopter of the model, is no longer a leading choice for utilities. For some organizations, outsourcing has provided a means of supporting business processes through an interim period while utility clients focus on their long-term strategies. As utilities refine their strategic direction in light of changes in the industry, in many cases the business processes are being returned to utility management and delivery. In cases where the decision



is made to continue to outsource, only the more simple and measurable transactional processes tend to be outsourced and overall control of complex business processes and key technology assets is being retained by the utility client. As the outsourcing market continues to evolve it is unclear whether these simpler transactional services will continue to be supported externally or whether companies will eventually transition these services back as they build internal capacity.

For Terasen Gas, the arrangement that has been in place since 2002 has benefited both the Company and its customers. Solutions have been found to handle the changes required to date, although Terasen Gas has had to make accommodations in the case of the more complex changes that could not be handled by the current CIS due to functional limitations. In particular, the technical solution for Customer Choice was largely built as a custom application at a cost of approximately \$18 million. The current CIS did not have the functional depth to accommodate what was required to implement the Customer Choice programs offered to commercial and residential customers which resulted in a solution. Since implementation, enhancements to the custom application have cost a further \$1.0 million, and will require additional investment should further enhancements be necessary.

One of the most significant developments in the outsourcing market is a move away from including critical business systems and applications as part of outsourcing agreements. Key systems and applications are now being migrated back to the utility owners for a variety of reasons. Terasen Gas' primary reason for utility control of critical systems is the need to understand the capabilities and opportunities inherent in the technologies to meet the changing needs of the Company and its customers.

A recent article published by UtiliPoint, a leading independent Energy Industry research and consulting firm, from whom Terasen Gas sought advice on appropriate customer care models, reported that only approximately 7% of the over 200 utilities surveyed have outsourced CIS (see Figure 3.1 below)¹⁴. The remainder had elected to retain direct control and ownership over their respective CIS. While the report does not provide details on each category, the report clearly shows that direct ownership of CIS is the overwhelming decision of utilities surveyed.

¹⁴ Outsourcing's Growth in the Utility Industry. Christopher Perdue. UtiliPoint International Inc. July 22, 2009. Note: A similar chart in Appendix B reports functions being outsourced as reported by UtiliPoint in 2008.





Figure 3.1: 2009 Utilities Outsourcing Survey

Source: UtiliPoint[®] International, Inc.

Note: EBPP is Electronic Bill Presentment and Payment Processing.

From the perspective of companies like Terasen Gas, obtaining maximum value from all supporting applications requires greater integration between all systems within the Company's IT application architecture. Terasen Gas has made significant investments in technology platforms for business applications that the Company currently owns, however, it has been unable to fully integrate its business applications and realise maximum value for customers and the Company, due to lack of ownership and control of the existing outsourced customer information system. The customer information system is a critical platform in the meter to cash process and is difficult to leverage in parallel with other technologies Terasen Gas has implemented and operates to enhance customer service quality. There are few means available to invest in upgrades, enhancements, and interfaces that assure the full value of these investments will flow back to the Company and its customers.

Companies like Terasen Gas who were "early adopters" in the fledgling outsourcing marketplace in the early 2000s have taken a range of actions beginning in 2007. Some agreements are being redefined in terms of both scope and quality of service, with a strong focus on the transactions that are more easily handled and measured through a generic outsourcing model. More complex functions are being brought back into the utility clients operations. The governance models to support outsourcing also have a much stronger ownership and control component on the utility client side. In cases where a lack of consistency in service quality, and the inflexibility of the outsourced environment to handle changing business needs are issues, business processes and control over supporting technologies are being repatriated. Table 3.1 below provides a summary of recent renegotiations and outsourcing contract changes in the utility industry. Terasen Gas is not alone in the direction the Company is taking with the Project with respect to insourcing core elements of the customer care function.



Table 3.1: Utilities Are Reconsidering Their Outsourcing Arrangements, Moving To Strategic Sourcing Models for Their Customer Care Functions¹⁵

Year	Country	Event	Recent Changes				
1995	USA	New Centuries Energy (now XCEL) outsources IT to IBM Global Services.					
2000	USA	XCEL renegotiates outsourced IT deal with IBM Global Services.	In 2007 XCEL has started to adopt a strategic sourcing plan bringing parts back in-house.				
2002	Canada	Enbridge outsources business process to CustomerWorks LP who assigned responsibility for the provision of the services to Accenture in 2002.	Enbridge adopted a strategic sourcing plan in 2007 evaluating different parts of the business separately, including bringing the CIS control back in-house. The renegotiated contract extends only to the end of the initial 10 year term and is now a direct contract with Accenture who was providing the services through a contract assignment from CustomerWorks LP.				
	Canada	Terasen Gas outsources business process to CustomerWorks LP who assigned responsibility for the provision of the services to Accenture in 2002.	In 2008 Terasen Gas is evaluating a strategic sourcing plan which will result in the majority of the customer facing functions moving in-house.				
	Canada	Hydro One outsources business processes to Capgemeni / Vertex UK.	Hydro One is positioning to execute a strategic sourcing plan evaluating the different parts of their business separately.				
2003	Canada	Enmax outsources business process to Accenture.	In 2008 Enmax began to bring all outsourced functions back in-house and plans to complete it in 2009.				
	USA	Southern Co. Gas outsources business processes to Accenture.	Southern Co. Gas brought all outsourcer functions back in house in 2007.				
2004	USA	Williams outsources business processes to IBM Global Services.	Williams brought the business outsourced to IBM / Vertex UK back in- house in 2007.				
2005	USA	NiSource outsources business processes to IBM / Vertex UK.	NiSource is adopting a strategic sourcing plan in 2008, bringing selected functions back in-house.				

As noted in Table 3.1 and UtiliPoint's report in Appendix B, many utilities are implementing a Strategic Sourcing model to replace earlier comprehensive Business Process Outsourcing

¹⁵ Outsourced Customer Service Models in the North American Utility Industry and Beyond, Utilipoint International Inc., 2008.



models. As is the case with Terasen Gas, requirements have changed for these organizations. An update of recent case studies of Canadian utilities active in the outsourcing market has been attached to the UtiliPoint report in Appendix B describing the evolution of these second generation arrangements. As business drivers are different for each utility the decisions that are being made reflect the specific timing of the decisions and the approaches being pursued. Below are three examples of utilities that have recently evaluated their BPO arrangements and determined that a Strategic Sourcing model (similar to Terasen Gas' application) is a more appropriate model going forward. These examples describe each utility's process and decision criteria for implementing changes to their prior BPO arrangements and confirm that Terasen Gas is not unique in the actions it is taking at this time.

The first example is Enbridge Distribution. It is most like Terasen Gas in terms of its current outsourcing strategy and implementation approach. Both utilities outsourced to CustomerWorks LP through an asset transfer model involving the full meter to cash business process, with the majority of each utility's supporting technologies being transferred to the service provider. Over the past year Enbridge has renegotiated their agreement to specifically exclude the CIS system including support and maintenance. Enbridge is in the process of completing a CIS replacement project moving from their legacy CIS system to SAP. Following a renegotiation of service metrics and a renegotiated scope and cost of services, Enbridge has decided to allow the remaining outsourced services (e.g., Call Centre, billing and credit and collections) to continue in this manner to the end of its original 10 year term.

Enmax also recently initiated a Strategic Sourcing model. In this case, the company repatriated control over their CIS system and critical customer facing business processes. This included CIS support and maintenance as well as all call centre and billing functions. The catalyst for this change was a CIS replacement project moving from a legacy system to SAP. In the case of Enmax a Strategic Sourcing approach was implemented very similar to the future operating environment that Terasen Gas is pursuing.

Finally, Hydro One, who had also engaged in large scale BPO for multiple business functions, is conducting an assessment of their entire BPO arrangement. Hydro One has undertaken a number of benchmarking initiatives to attempt to confirm the ongoing value of the outsourcing arrangement. At this time, Hydro One has decided on a Strategic Sourcing approach and is evaluating each business process to determine what should be repatriated and outsourced, and in the case of outsourced, who would be the best provider for the specific service.

Terasen Gas is not unique in its desire to move forward and re-evaluate what customer care model provides the best long term value to customers and the Company. The examples above demonstrate that there are different ways to implement Strategic Sourcing. In the next section the Company will discuss UtiliPoint's recommendations not only for Strategic Sourcing but also specific recommendations regarding which activities should be insourced and which activities should remain outsourced.

3.3.2 UtiliPoint's Recommendations for Terasen Gas

Terasen Gas is following the recommendation of UtiliPoint in proposing a Strategic Sourcing Model.



The UtiliPoint report in Appendix B describes the evolution of BPO outsourcing in the utilities industry and the need to move to a Strategic Sourcing model. Also in Section 2 of its report Utilipoint cites as the best business strategy for utility customer service one where the customer service group business strategy:

- Supports the ownership of technologies that underpin business success;
- Enables the development of high quality business processes for those technologies according to business needs to deliver superlative customer service;
- Facilitates the management of outside vendors with strong management contracts that improve over time and change in a flexible fashion along with the needs of the utility business; and
- Acts as a complement to the business model of the enterprise.

The report states, "UtiliPoint's overarching recommendation that the "right model" for outsourcing customer service at Terasen is a hybrid-approach capturing the best features of ITO, Hosting, Managed Services and BPO that corresponds to market realities particularly in terms of supplier maturity, capability, and reliability".

Specific recommendations for Terasen Gas are summarized at the end of Section V of the UtiliPoint report:

- "Bring the CIS in-house or back under the immediate control of utility management;
- Re-allocate business process outsourcing responsibility to more than one vendor often in smaller, transactional focused contract; and
- Shorten the duration and inflexibility of contracts aiming at agility, the predictable variabilization of costs and service levels to suit dynamic business needs."

UtiliPoint's recommendations are reflective of current best practices in outsourcing. As a utility industry expert, UtiliPoint has been surveying utility companies and working in the utilities industry for over 75 years. The trends articulated in the special report are supported by the attached case studies as well as the additional case study updates related to other Canadian utilities facing similar concerns. Figure 3.1 above shows current outsourcing trends for utilities and confirms that there is much higher participation in utility outsourcing for discrete processes.

As noted in the UtiliPoint report: "Much of the renewal and realignment is aimed at outsourcing more discrete, self-contained, transaction oriented processes and information technology functions rather than holistic, multi-function business processes or business units. Overall this approach reduces utility cost and risk and increases utility and customer satisfaction with outsourcing."

Utilipoint states that there are 3 primary reasons why a Strategic Sourcing model is appropriate for Terasen Gas:

- Firstly, the model provides flexibility for the utility to optimize processes, add capability, and achieve business objectives while controlling the key contact points with customers and managing customer service quality;
- Secondly, strategic sourcing enables the utility to outsource only those processes and activities that do not impact the control of business processes or technology choice;



• Thirdly, the utilization of an outsourcing partner provides capabilities, labour, and specialized technologies that are necessary to support the maximization of selected processes and functions identified by the utility.

UtiliPoint's assessment of customer service models within the utility industry identified that utilities are moving away from traditional BPO models to strategic sourcing models similar to the one proposed by Terasen Gas in this Application.

3.3.3 Current Performance Challenges

As with most of the early utility BPO deals, Terasen Gas' current outsourcing arrangement with CustomerWorks LP was based on an asset transfer model. Under this model, the provider (in this case CustomerWorks LP) acquires the resources and systems of the outsourcing utility client in order to build the base capabilities to support the services going forward. A key assumption made at the time these deals were negotiated was that the systems and business processes of these anchor clients would form the basis for a platform of operational and technical capabilities that would launch additional business opportunities for the outsourcer and would lead to efficiencies and economies of scale that would benefit the outsourcer, the Company and its customers. A further assumption was that the systems and processes would be sustainable over the long term and that changes would be facilitated through the addition of new clients and the scope change provisions of the agreement.

Although the arrangement has met the original outsourcing objectives and in general met service levels for measured metrics, the quality of service provided to customers in recent years has declined. The service provider has been unable to leverage the technical platform for use by other clients and therefore has only made minimal investments to sustain the supporting applications to meet the terms and conditions of the Client Services Agreement. The business processes have also remained static and largely reflect the way the functions were performed prior to outsourcing.

3.3.3.1 Sustainability Concerns

In recent years, the overall sustainability of the Business Process Outsourcing arrangement with CustomerWorks LP has become a concern. Without significant investment the current outsourcing arrangement cannot keep pace with the Company's changing business needs and customer expectations related to service delivery and increased information. Terasen Gas has identified two key factors that challenge the sustainability of the arrangement with CustomerWorks LP:

1. Investment will be required to upgrade to more robust CIS and call centre technologies; and

2. Investment will be required to support a more skilled workforce.

The change drivers described earlier illustrate the need for more configurable and functionally rich technologies to support the Company's changing business requirements as well as meeting customers' expectations in an environment that is becoming more complex. The expectations of the workforce supporting these increasingly more complex business processes is also

TERASEN GAS INC. CUSTOMER CARE ENHANCEMENT PROJECT CPCN INSOURCING OF CUSTOMER CARE SERVICES AND IMPLEMENTATION OF A NEW CIS



increasing both in terms of utility specific and regional knowledge. Within the current outsourcing arrangement Terasen Gas cannot quantify the cost to address these concerns. Although the Company can negotiate the costs associated with any change order under the CSA with CustomerWorks LP, there is no ability to compare the proposed costs in a competitive market. From a technology perspective the cost to replace or enhance the current systems would not be less than the costs that Terasen Gas has determined through the RFQ's for both the CIS system replacement and the acquisition of current call centre technologies.

In terms of attracting and retaining a skilled workforce possessing specific gas utility and regional knowledge, this has been an ongoing concern. The outsourced workforce is characterized by high turnover, particularly in the call centre. Also, as the work has moved out of province and off-shore, overall quality of the services has deteriorated. Not all service quality concerns are reflected in the high level service metrics negotiated in the current CSA. This leaves discretion available to the outsourcer to focus on internal priorities which may not align with Terasen Gas priorities. Changes to service levels are also contemplated under the scope change provisions of the current agreement although Terasen Gas does not believe there is value in pursuing this option. Terasen Gas has limited ability to validate that the cost of changes to service levels would be market competitive.

The table below highlights some of the areas of under-performance reported by the outsourcer related to the service metrics negotiated in the Client Services Agreement with CustomerWorks over the past year. The metrics were initially intended to represent overall service quality. These contracted metrics do not address specific business process service quality issues that also contribute to the degradation of overall service quality. Examples of customer impacting areas that are not included are the timeliness of refund processing, complex metering investigations and account adjustments. The complexity of escalated customer complaints to the Commission and Terasen Gas executives is also increasing and taking longer to resolve in light of the number of errors being made on each account.

The table below shows the target service levels and monthly performance results over the past twelve months for the areas that have the greatest customer impact. Within the Client Services Agreement including the new services to support Customer Choice, there are thirty metrics. Eleven of these metrics are reporting only and do not attract penalties for performance deficiencies. The highlighting in the table indicates months where the service level was not met and a performance penalty was assessed.



	Target	J-08	A-08	S-08	O-08	N-08	D-08	J-09	F-09	M-09	A-09	M-09	J-09
Call Centre													
Billing Inquiries	75%	77%	76%	77%	51%	75%	81%	75%	77%	78%	77%	77%	76%
Emergency Call	95%	99%	98%	99%	97%	98%	98%	99%	99%	98%	98%	99%	97%
Customer Satisfaction - Quarterly	*		57%			60%			54%			61%	
Collection Inquiries	65%	69%	69%	69%	42%	66%	76%	71%	71%	70%	68%	66%	67%
Mass Market Billing													
Accuracy	99.9%	99.9%	71.7%	100.0%	100.0%	50.7%	96.2%	28.0%	86.2%	97.9%	100.0%	99.9%	99.9%
Timeliness	95%	100%	100%	100%	100%	100%	100%	100%	100%	100%	95%	100%	100%
Complete- ness	95%	99%	100%	99%	99%	100%	99%	100%	99%	100%	99%	99%	99%
Industrial Billing													
Accuracy	99.5%	99.8%	89.0%	95.0%	99.5%	88.4%	96.3%	63.5%	99.0%	99.8%	99.9%	99.6%	99.9%
Timeliness	95.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 3.2: Summary of Service Level Results (July 2008 to June 2009)

* The service level target for Customer Satisfaction – Quarterly is determined to be met if the result is within 5% of the value representing the average utility. The industry metric is redefined semi-annually. The variance allows for the margin of error based on sample size.

The service failures in areas of call centre response and billing accuracy are highly visible and the impact on the Company and its customers can be significant.

At a macro level and to further illustrate declining performance over the longer term the table below is a count of service level failures by month, excluding reporting only metrics, in each year since the beginning of the outsourcing arrangement. 2002 is not included as this was the initial year of the agreement and an exception to service level compliance was negotiated to facilitate the repatriation of the Lower Mainland customers from BC Hydro. As indicated below, after a stabilization period, performance over the initial five year term was satisfactory. In recent years, largely due to staff turnover and the need to upgrade the underlying technologies to a more stable environment, the quality of service has been declining.

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
2009	2	2	4	0	0	0	0						8
2008	6	4	0	2	0	0	0	2	1	2	2	2	21
2007	1	0	0	1	0	0	0	1	0	0	0	2	5
2006	0	0	0	0	0	1	0	0	0	0	0	0	1
2005	1	0	0	0	0	1	0	0	0	0	0	1	3
2004	1	0	0	0	2	2	0	0	0	0	1	0	6
2003	1	0	1	0	2	0	0	0	1	3	0	1	9

Table 3.3: Summary of Service Delivery Failures by Month, 2003 - 2009 YTD

The number of service metrics that attract penalties under the Client Services Agreement was 16 in the original agreement and increased to 19 with the addition of Customer Choice in 2007.



Over the last eighteen months, Terasen Gas has escalated the Company's concerns to both CustomerWorks LP and Accenture related to the quality of service provided. These concerns relate to the number and frequency of billing errors, the transactional work backlogs in a number of areas which negatively impact our customers, and the lack of internal controls related to timely and accurate processing. We have also had a number of relatively high profile service quality complaints that escalated to the public forum that are indicative of overall declining service quality in the call centre as well as in the back office.

Terasen Gas continues to work with the outsourcer to address these issues. Although we do see temporary improvements through these escalations, the Company is not confident that the improvement can be sustained over the long term without significant investment in technologies within the outsourcer's operation, as well as a redefinition and renegotiation of service quality expectations.

3.4 Justification Conclusion: Strategic Shift in Customer Care Delivery

In 2001, when the decision was made by Terasen Gas to be an early adopter of Business Process Outsourcing, the Company faced significant challenges both in terms of systems and service delivery capabilities. These challenges included: uncertainty in respect of implementation cost for a new customer care model; technological challenges related to the adoption of the Peace CIS platform for Lower Mainland customers; and the challenge of tripling TGI's operating capacity and redefining its business processes to support the provision of customer care functions to the Lower Mainland customer base. At the time, the twelve years of successful outsourcing under the BC Hydro transitional agreement following the Lower Mainland gas division purchase in 1988 had reinforced the potential for BPO to be a successful CustomerWorks LP, through the Enbridge participation, had existing capacity to model. accommodate the operational needs of Terasen Gas without the need to build or develop significant additional capabilities in-house at that time. The existing BPO customer care model has met the original objectives of the Client Services Agreement, and has captured the benefit of CustomerWorks LP's operational capacity. CustomerWorks LP has generally met contractual commitments, and where it has not met those commitments it has paid performance penalties.

Nevertheless, after nearly eight years of utilizing a comprehensive Business Process Outsourcing strategy for customer care delivery, Terasen Gas believes a change in the model is required to address future needs created by the three key drivers identified earlier in this Section. Consistent with UtiliPoint's recommendations, we believe that in the future our customers will be best served if the core assets required to provide customer care services are owned and operated by the Company and core customer care services are delivered directly by Terasen Gas employees.

4. Analysis and Alternatives

Terasen Gas has conducted an extensive evaluation of its customer care delivery model and required supporting technologies, culminating in this Application. The Company's June 2, 2009, Application discussed the core Project components separated into customer care service delivery and the supporting CIS technology that enables business processes. This Amended Application takes the additional step of presenting the analysis and alternatives for each of the four areas that comprise the Project: CIS Software, CIS Implementation and Maintenance, Call



Centre and Billing and Back Office Operations. Although each Project component is discussed individually, the components are interrelated and dependent on one another for the successful implementation of the overall Project. As discussed in this section, in some cases the interrelationship between the components constrains the potential or practical alternatives available for consideration, as does the structure of the existing Client Service Agreement with CustomerWorks LP. Based on thorough consideration of all of the practical alternatives for each of the components, Terasen Gas has arrived at a total package – the proposed Project – that delivers value to customers.

This section is organized as follows. Section 4.1 addresses CIS Software selection. Section 4.2 addresses the analysis of Software Implementation and Maintenance alternatives. Section 4.3 describes Call Centre options. Section 4.4 describes Billing and Back Office Operations.

4.1 CIS Software

The customer care and billing system (CIS) is the key technical enabler of the critical Meter to Cash process. Terasen Gas believes that to achieve higher operational efficiency, a CIS must support integration of complex business processes that cross several enterprise applications currently employed by Terasen Gas. These existing enterprise applications include Customer Relationship Management (CRM – customer & partner (construction i.e. builders, developers, gas fitters) relationship tracking), Enterprise Resource Planning (ERP – Financial, HR, and Supply Chain processes) and Enterprise Asset Management (EAM – Work Management, Preventive Maintenance, Meter Management). The SAP CIS platform selected for this Project will deliver the necessary functionality and will facilitate further integration of TGI's business processes.

This section discusses the various alternatives relating to CIS software that Terasen Gas explored in the course of arriving at a preferred Project strategy. The decisions required were:

- i. The selection of the desired software ownership model, i.e. software as a service versus direct ownership of software;
- ii. Having determined that a direct ownership model is desirable, Terasen Gas considered whether to procure a custom build solution versus purchasing a commercial off the shelf product; and
- iii. Having determined that purchasing a commercial off the shelf product is most advantageous, Terasen Gas had to select among software products. Terasen Gas concluded that, among the products considered, SAP was the preferred solution.

Each of these decision points – the options, the analysis and the decision reached - is discussed in turn in the following subsections.

4.1.1 Software Ownership Options

Terasen Gas currently does not own a CIS. Terasen Gas' CIS capabilities are provided through a services agreement with a third party, CWLP. There were two options to consider in regards to the ownership of CIS software: continue to have a CIS provided as a service by a third party; or acquire direct ownership of the CIS software. Both of these CIS ownership options are



described below. For the reasons described in this section, Terasen Gas believes that direct ownership is the preferred model.

The software as a service option involves the vendor (or the service provider) hosting the system on its own computers, and in its own data center, and providing access to the system on a subscription basis, instead of a software vendor selling a software license that the client then implements and maintains in its own data center. In cases where there are multiple customers for the same service and little customization or training is required to support those customers, this can be a cost-effective way of utilizing technology. WebEx, the leading provider of web conferencing, is a good example of a specific service Terasen Gas buys on demand without having to invest in software licenses and infrastructure.

The alternative to software as a service is ownership by Terasen Gas. Direct ownership of the CIS affords Terasen Gas with the greatest flexibility to manage all aspects of the CIS life-cycle.

Unlike the Webex example described above, a CIS is a key software asset that supports Terasen Gas' ability to respond to external requirements, whether driven by customers, government, or regulatory, and enables the flexibility to provide new and improved services to customers. Direct ownership gives Terasen Gas the control over the investment decisions and setting of the priorities for all aspects of the CIS. This includes:

- how and when changes are made to the system such as upgrades;
- insight into what new capabilities are enabled by newer versions of the software and could be utilized to obtain process improvements and efficiencies to the benefit of the customer and the decision to take advantage of those opportunities;
- greater control over system quality; and
- greater cost transparency to the ongoing operation and enhancement costs of the CIS that can be verified through market competitive processes such as the RFQ process.

A recent article published by Utilipoint, a leading independent Energy Industry research and consulting firm from whom Terasen Gas sought advice on appropriate customer care models, reported that only approximately 7% of the over 200 utilities surveyed have outsourced CIS (see Figure 4.1 below)¹⁶. The remainder had elected to retain direct control and ownership over their respective CIS. While the report does not provide details on each category, the report demonstrates that direct ownership of CIS is the overwhelming decision of utilities surveyed.

¹⁶ Outsourcing's Growth in the Utility Industry. Christopher Perdue. UtiliPoint International Inc. July 22, 2009. Note: A similar chart in Appendix B reports functions being outsourced as reported by UtiliPoint in 2008.







Source: UtiliPoint[®] International, Inc.

Note: EBPP is Electronic Bill Presentment and Payment Processing

Consistent with the vast majority of utilities surveyed by UtiliPoint, Terasen believes that direct ownership is the preferred model. As outlined above, direct ownership provides Terasen with the greatest flexibility to market test and control costs, ensure that adequate supply of support is provided, and efficiencies that can be gained through improvements to the software can be passed on to the customers. Ownership also means that Terasen Gas makes the decisions concerning the nature of the CIS software.

4.1.2 CIS Software Options: Custom Build vs. Buying "Commercial off the Shelf"

The second element in the CIS assessment was to consider CIS software options. There are two general CIS product types available to Terasen Gas: a "custom build" application or "Commercial off the Shelf – (COTS) packaged software. Each option is discussed below. Terasen Gas selected the COTS packaged option for the reasons outlined in this section.

4.1.2.1 Custom Build

The first option for CIS software is custom build. The term "custom build" refers to software that is specifically designed and programmed for an individual customer utilizing software development tools. Custom build solutions are rarely used today.

In the past, utilities typically selected custom build software as few packaged options existed that would meet functional requirements. In the case of Terasen Gas in the early 2000s, our functional requirements were sufficiently unique that there was no packaged solution available on the market that could meet current requirements. Terasen Gas implemented the CAFE system as a custom build software system. CAFÉ is an application that accepts applications for



gas, provides customer and partner¹⁷ relationship tracking, and allows for detailed project planning, including the application of the Main Extension (MX) tests. It is the front end for staging data to SAP and Click Schedule¹⁸ to continue the construction process.

Custom build solutions can be effective in meeting current needs at the time of installation; however, there are a number of interrelated shortcomings that have resulted in the industry moving away from custom build software.

First, the main problem with custom build software is that, generally speaking, it is more cumbersome and complex to maintain than a packaged solution. Custom build applications must be continually modified to meet each new requirement as it arises, even as the underlying technologies approach obsolescence. Considerable investment can be required to address the obsolescence of the underlying technologies, through rewriting the entire application on a newer technology.

Second, the maintenance of system documentation can prove to be a significant effort depending on the nature of the changes. All documentation must be manually maintained.

Third, obtaining the requisite application support once the CIS is installed is typically difficult as the application is unique to the particular company. The company bears all of the risk of obtaining and training the resources required to maintain a unique application. The difficulty usually lies in attracting and retaining resources dedicated to a very specific application that can have little transferable marketable skills outside of that company.

Fourth, the only opportunity to increase the functionality of a custom build software solution is for the utility to build the improvements itself. Whereas in the case of a commercial off the shelf software package there is considerable incentive on the part of the software developer to keep up with the market by introducing continual innovations, with a custom build software solution there is no opportunity to obtain new functionality based on the collective requirements of many customers.

As a result, companies rarely invest in significant custom build solutions unless no package solution can be found or for competitive advantage. These reasons spurred the development and maturation of the CIS product market.

4.1.2.2 Buy "Commercial off the Shelf" CIS

The second CIS software option is a commercial off the shelf, or COTS, product. A COTS package refers to an application software solution developed for sale to the general public. There are many providers of packaged solutions for CIS. They can differ in target customer segments, functionality, and market acceptance, but there are enough options available that have removed the need for a custom build alternative.

¹⁷ Partner in this context refers to builders, developers and gas fitters – construction partners.

¹⁸ Click Schedule is the field workforce scheduling and dispatching software utilized by Terasen gas to manage its Distribution Operations workforce. SAP is the work order system. Café is the first step in the order fulfillment process for field work. The term "staging" refers to the initial data capture for input into SAP and Click Schedule.



There are a number of reasons why, today, commercial off the shelf software tends to be the preferred choice of most utilities.

First, packaged software is designed to appeal to a large audience of users, while allowing the programs to be tailored to a particular user's specific requirements. The developers of leading software packages have invested heavily in both system functionality and extensive capabilities for users to easily tailor the package to meet their requirements without compromising the integrity of the delivered solution. The leading vendors anticipate what functions and features of their product could have the most variety of implementation options in its customer base and build the system so that each purchaser can implement its particular requirement without customizing the core product. It is an industry best practice to not customize a software package whenever possible as this has proven to be one of the greatest contributors of ongoing operating cost. By investing in how the package is built, the vendor is provided with a significant advantage in providing cost effective support of the software solution on an ongoing basis.

In the CIS marketplace, independent industry research groups, such as Gartner, track and report on the state of vendors in this marketplace through research documents like "Magic Quadrant for Utilities Customer Information Systems".¹⁹ Companies like SAP, Oracle, and others take advantage of their extensive user community involvement in soliciting input into future design and functional improvements and incorporating them into future releases of the product while ensuring that all existing functionality remains and the impact to the customer in introducing new versions of their product are minimized.

Second, a related advantage in a package solution is that functionality can exist in the package but doesn't need to actually be implemented or "turn on". This allows for companies that require the functionality to be able to take advantage of it while for those companies that do not require the specific new function, they do not have to turn it on or can turn it on at a later time when that function becomes a requirement. The advantage of the package solution is that there is no additional cost for the availability of a feature that is not turned on – it comes as part of the package. The only cost incurred is any costs associated with the turning on of that feature should it be a requirement at a later point in time, as well as any associated maintenance costs. This cost can vary based on resources utilized.

Third, companies employing a packaged solution are more readily able to find resources familiar with the software that can be used in maintaining and supporting the system. Unlike a custom built solution, where the software is unique to a specific company, a software package, especially a package with a significant amount of customers who use it, has developed a significant skilled resource base from which a company can draw from. Using SAP CIS as an example, there are over 600 utilities worldwide utilizing this solution (according to SAP). There are many consulting firms and utilities with significant SAP knowledge which is a transferable skill from company to company. People will migrate to these kinds of skills as opposed to niche technologies such as a custom built solution for a company as a matter of career development.

As such, the COTS solution addresses the shortcomings of the custom build solution identified in the previous section.

¹⁹ Gartner Publication ID Number: G00168517 Magic Quadrant for Utilities Customer Information Systems Publication date: 15 June 2009



4.1.2.3 Preferred Software Acquisition Option: Commercial Off the Shelf

As outlined above, the packaged CIS market has matured and there are quality products available. The time and cost to build a CIS "from scratch" when strong packaged solutions are available are prohibitive and unnecessary. It is for these reasons that Terasen Gas decided to pursue the evaluation and acquisition of a packaged software solution.

4.1.3 CIS Options

Having made the decisions to own the CIS software, and to select a commercial off the shelf solution, Terasen Gas conducted an extensive process to determine which commercial off the shelf product will best meet our existing and future CIS needs. Terasen Gas assessed the CIS software offered by Oracle, SAP and Peace. For the reasons outlined in this section, Terasen Gas believes that the SAP system is the most cost-effective.

4.1.3.1 CIS Options Evaluation Process Overview

Terasen Gas conducted a market review to identify leaders in the CIS marketplace, and conducted a competitive solicitation process to obtain quotations from various providers.

Terasen Gas' market review suggested that there were two leaders in the marketplace that would best meet Terasen Gas' requirements and merited detailed consideration. The two products were the CC&B product from Oracle and the IS-U/CR&B product from SAP. The independent research firm Gartner identifies these CIS products as being market leaders in its latest publication of its evaluation of the CIS product marketplace, "Magic Quadrant for Utilities Customer Information Systems". Refer to Appendix O for the full report. Utilities that are actively pursuing business process improvement are now typically favouring CIS platforms such as SAP and Oracle because they enable cross-functional business process improvement initiatives built on enterprise service architecture.

Terasen Gas engaged Micon Consulting, an independent consulting firm focused on the investor-owned and public sector utilities industry, to support the Company in the CIS software evaluation process. Micon has conducted over 100 business case development and product vendor – System Integrator evaluations over the past twenty-two years. A key consideration in engaging Micon was that it does not promote or sell any software, nor does it have a business relationship with any vendor who sells or integrates commercial software. Micon's role was to facilitate the Request for Proposal ("RFP") / Request for Quotation ("RFQ") process and to assist Terasen Gas with the development of the requirements and the evaluation criteria based on their extensive expertise.

Details on the evaluation process are provided in Appendix C. Briefly, the steps in the process were:

• Develop requirements and alternative solutions;



- Determine Software Vendor candidates;
- Conduct Detailed Product Assessment;
- Select System Integrator; and
- Conduct Contract Negotiations.

As discussed above, Terasen Gas narrowed the potential new CIS product providers to pursue through an RFP process down to two companies: SAP and Oracle. These two providers are the industry leaders in terms of providing highly configurable CIS solutions with a proven history of ongoing core development and continued investment in their products. Both organizations also have significant installed client bases and have articulated future development plans related to their core products that Terasen Gas believes will meet our evolving business requirements.

Terasen Gas issued a RFP to both SAP and Oracle, and received responses from each company. For a comprehensive list of detailed functional requirements as identified by Terasen, refer to Appendix D – CIS Vendor RFQ, pages 82 - 254. Both products were capable of meeting Terasen Gas' requirements. Neither product was able to clearly demonstrate an overwhelming advantage over the other based on specific functionality. However, the actual product functionality was only one part of the comparison analysis. Terasen Gas considered a number of factors in the evaluation, including functionality, cost to acquire, and the cost to implement and run.

As part of its due diligence exercise, Terasen Gas also reviewed the Peace CIS product being utilized by its current service provider. At the start of the evaluation process, Peace ownership was still not finalized. Peace was acquired by First Data Corp. in August, 2006. By the spring of 2008, First Data was actively seeking to divest of the Peace acquisition. Without a concrete resolution to the ownership issue, Terasen Gas did not consider pursuing any additional information about the Peace product as there would be no commitment to any future direction without certainty of ownership. The Peace acquisition by Hansen Technologies, which settled the ownership issue, did not conclude until late October 2008, at which time Terasen Gas made further inquiries regarding the Peace CIS.

Each of the three software options considered, Oracle, SAP, and Peace are discussed below. Refer to Section 4.2 for discussion around implementation and maintenance.

4.1.3.2 Alternative # 1 – Oracle

The CC&B solution from Oracle was evaluated through the RFQ process as summarized above and detailed in Appendix C. The following is an overview and analysis of that evaluation.

4.1.3.2.1 Response to RFQ

As part of the formal RFQ process, Oracle was asked to respond to its abilities to address Terasen Gas' functional and technical requirements. It was also asked about commercial terms, support and maintenance and to comment on the infrastructure and support requirements over and above what would be provided by Oracle for the proposed solution. The information provided was complete and allowed for proper consideration of Oracle's product and quotation.



4.1.3.2.2 Analysis

Terasen Gas found the Oracle CC&B product to be a solid product, which could meet Terasen's CIS requirements from a functional standpoint. Technical requirements could also be addressed. For a detailed list of the functional requirements, refer to Appendix D – CIS Vendor RFQ, pages 82 – 254. For a list of technical requirements, refer to pages 256 – 297 of the same Appendix. Product cost and ongoing maintenance fees were market competitive and Terasen was satisfied with Oracle's commitment to the product, its flexibility, and scalability.

There were two challenges facing an Oracle solution that were not present with SAP:

- i. The overall cost to maintain an Oracle solution (i.e. beyond just the software cost) would increase because Terasen Gas would not be able to leverage any of its existing infrastructure or support organization based on the SAP solution already installed. For the detailed analysis and conclusions around ongoing support, refer to Section 4.2
- ii. As an Oracle solution would be a separate system from SAP, obtaining end-to-end process integration would be more complex and costly to develop and maintain.

Terasen Gas was aware that the challenges associated with the integration complexity and cost would be an issue with all but an SAP solution, but was also aware of other installations where an Oracle CIS & SAP co-existed and needed to validate how this was done in other installations through detailed reference checks and discussions with the proposed system integrator. Terasen Gas concluded that while an Oracle solution would have additional challenges compared to an SAP solution, if these challenges could be satisfactorily overcome, the product itself would be a solid solution. Therefore, further investigation into how the support and integration challenges might be met was warranted.

Terasen Gas conducted this further investigation through the System Integration RFQ process. Terasen Gas then made its final decision on an overall CIS solution at the conclusion of the RFQ process for selecting a System Integrator. Refer to Appendix C – Selection Process for details on the RFQ process for System Integrator, and refer to Section 4.2 for details on the evaluation of implementation and maintenance alternatives.

4.1.3.3 Alternative # 2 – SAP

The second alternative identified as a potential commercial off the shelf packaged CIS software solution is the IS-U/CR&B solution from SAP. It was evaluated through the CIS software RFQ process as described above and detailed in Appendix D, and ultimately emerged as the preferred solution. The following is a description of Terasen Gas' assessment of SAP's response to the RFQ.

4.1.3.3.1 Response to RFQ

As part of the formal RFQ process, SAP was asked to respond to its abilities to address Terasen's functional and technical requirements. For a detailed list of the requirements, refer to Appendix D - CIS Vendor RFQ, pages 82 – 254. It was also asked about commercial terms,



support and maintenance and to comment on the infrastructure and support requirements over and above what would be provided by SAP for the proposed solution.

4.1.3.3.2 Analysis

Terasen Gas found the SAP IS-U/CR&B product to be a solid product, which could meet all of Terasen's CIS requirements.

One key component of the SAP solution was the newly released CRM version 7. This fundamental redesign of the user interface for Customer Service Representatives was critical to address a usability shortcoming in previous versions of the SAP solution. Follow-up reference checks with another customer (Enmax) satisfied Terasen Gas that this long-standing concern with an SAP CIS solution had been adequately addressed.

Product cost and ongoing maintenance fees were market competitive and Terasen Gas was satisfied with SAP's commitment to the product, its flexibility, and scalability. Furthermore, given that Terasen Gas had already implemented an extensive SAP application footprint²⁰, an SAP CIS would best meet Terasen Gas' requirements to support end-to-end business process integration. Because of the integrated architecture of SAP and Terasen Gas' current footprint, no less than fourteen interfaces or integration points with external systems (in this case, SAP) become unnecessary, greatly simplifying the overall architecture and support effort in this area.

Another key consideration is that Terasen Gas currently uses SAP to manage the detailed information of almost 1 million meters. Reports listing all activity on changes to meter data are run monthly and the changes to the data common to both systems must be manually reconciled, as both require the information and both provide the ability to modify the information based on the nature of the specific requirements of the business processes each application supports. This reconciliation effort is unnecessary with a fully integrated SAP solution, which, in turn, improves data quality. Improved data quality allows Terasen gas to redirect this considerable time and effort towards value-add support of the customer. Terasen Gas would also be able to leverage its existing SAP infrastructure and technical support capabilities to provide the most cost effective ongoing support model. For the detailed analysis and conclusions around ongoing support, refer to Section 4.2

The final decision on the appropriate CIS software solution was not made until the conclusion of the System Integrator RFQ process, because Terasen Gas wanted to ensure the total overall cost including implementation was considered in the final analysis. Refer to Appendix C – Selection Process for details on the implementation RFQ process. Refer to Section 4.2 for details on the evaluation of implementation and maintenance alternatives.

4.1.3.4 Alternative #3 - the Peace CIS Platform

Terasen Gas has many years of experience with the Peace CIS. For the reasons set out below, Terasen Gas eliminated Peace as an option for achieving the objectives for the Project.

²⁰ Terasen currently utilizes SAP for all financial reporting, costing, supply chain, HR, pay and time, meter management, preventative maintenance, work management, field services and learning management and business intelligence.


4.1.3.4.1 Initial Discussions and RFQ

Although the acquisition of the Peace product by Hansen Technologies in October 2008 addressed the previous uncertainty regarding Peace ownership, Terasen Gas had other concerns about the Peace platform as a long-term solution for its CIS. These concerns were focused in two areas:

(i) The commitment to the product as a packaged solution and standardization across the customer base which up to now has been lacking; and

(ii) Clarity on the definitive strategy behind the ongoing support model, both from the vendor and the external partner network, which would play a key role in supporting the product cost effectively over the long-term. Terasen needed assurances that the support model would be robust.

In discussions prior to Terasen Gas formally requesting details on Hansen's future business plans, Hansen had indicated that they were revisiting the direction that Peace had previously presented at an industry conference earlier in the year²¹. Hansen could not commit to the amount of continued investment into the Peace product or the direction of that investment. They could not confirm whether the Peace product would continue down the same product direction that the former owner had planned. At that time, they were unable to provide details as to future functionality or a committed-to release schedule.

In November 2008, Hansen was provided with the same requirements documents to be completed in the same manner as the other product vendors (SAP & Oracle). For a comprehensive list of detailed functional requirements as identified by Terasen Gas, refer to Appendix D – CIS Vendor RFQ, pages 82 - 254.

Hansen had also stated to Terasen Gas that the installed product used by CustomerWorks LP had functionality and features that Terasen Gas could take advantage of to improve the efficiency of the existing product. As Terasen Gas was unaware of any such capabilities, Terasen Gas requested that Hansen document specifically where this was the case in their response to the requirements. Hansen was also provided with a series of specific management questions to provide Terasen with insight into the new ownership and its business plans as they pertain to the Peace product and the ongoing support strategy.

Hansen was provided the same amount of time to respond as was provided the vendors engaged in the formal RFQ process.

4.1.3.4.2 Analysis of the Peace CIS

As discussed below, the information provided by Hansen was incomplete and did not address Terasen Gas's initial concerns.

The purpose of the requirements document was to provide Terasen Gas with the ability to conduct a comparative, detailed analysis of requirements to confirm capability, scope, and

²¹ CS Week 2008 in San Antonio Texas



costing information for each alternative being considered. Hansen was asked to identify what requirements could be met by their solution "out of the box", with configuration changes, with user exits, with product modifications, in future versions (version release date to be identified where it could), or are not supported. Hansen was asked to provide detail as to whether each requirement could be met, how each requirement was to be met, and the effort in person-days to meet each requirement. This format was to ensure that a like-for-like comparison of each alternative could be made, and to allow Terasen Gas to substantiate the effort to implement the functionality and how it would be met, which, in turn, has an implication on the ongoing sustainability of the product. Over and above identifying which requirements could be met in a version of the software that was newer than what Terasen had installed, Hansen was also specifically asked to identify where requirements could be met by the existing product, but had not been implemented by the existing service provider, and the effort (which would drive cost) that Hansen expected would be required to implement those changes.

The response from Hansen to the requirements document provided a high-level narrative overview of each functional area, and a self-assessment on how well a proposed Peace solution could meet Terasen Gas' overall requirements. Hansen did not address individual requirements and it provided insufficient supporting detail that could be verified or compared to any other alternative. This made it impossible for Terasen to evaluate the Peace solution in comparison with other alternatives. Based on the format and level of detail in Hansen's response, Terasen was unable to validate what requirements could be met by the Peace CIS, how the requirements could be met, or what the effort would be to implement the solution (which in turn relates to cost).

The responses to the management questions, although lacking some specific details requested around the Peace product, provided Terasen Gas with enough information to understand the intent and direction that Hansen was planning to pursue.

One key consideration for Terasen Gas was that Hansen intended to focus on a build-to-fit product strategy emphasizing customization of the base product to suit the specific customer's unique requirements in the way the customer wants them addressed. Terasen Gas feels this client-specific build-to-fit strategy, as opposed to a packaged solution approach, is not long term sustainable or desirable for TGI. While this approach may be suitable for other clients, the emphasis of individual customer customization is more reflective of the custom build application approach as opposed to a true "packaged solution" with the associated benefits of standardized product design, consistent versioning across its client base, greater support capabilities, and less overall cost to maintain the application. The Gartner article, "Magic Quadrant for Utilities Customer Information Systems", identifies that this same concern exists with other customers. Refer to Appendix O, page 13.

Another consideration that caused TGI to prefer SAP and Oracle was that SAP and Oracle had already established formal partnership models with many System Integrators. There are also many consultant placement companies and independent consultants specializing in SAP and Oracle skills. While expressing a willingness to work with anyone requested by the customer on a specific initiative, Hansen's business model did not involve establishing a Peace-related network. Terasen Gas believes that there is a significant benefit in having greater flexibility to obtain support services. The partner model also ensures a market competitive environment for future services.



After Hansen filed its letter dated July 1, 2009, with the Commission, Terasen requested permission from Hansen to have the responses to the requirements documents and management questions filed as evidence under a separate confidential cover. Hansen denied Terasen Gas's request, and as a result they have not been provided.

4.1.4 SAP as Preferred CIS Software Solution

Terasen Gas pursued a rigorous evaluation process, in conjunction with external experts, in selecting an appropriate CIS solution to meet the future needs of customers and the Company. See Appendix C. The Company's assessment was that the SAP IS-U/CR&B product was the optimal CIS software solution, from the combined perspectives of functionality, ease of implementation, ongoing operating needs, integration with other Terasen Gas systems, and cost effectiveness.

SAP is a robust, industry recognized leader in the CIS space with over 600 utility installations worldwide representing a 66% market share of the global CIS market and 41 new sales in the last year (according to SAP). The SAP software met Terasen's functional and technical requirements and has the capability to support future functionality identified by Terasen for no additional cost of the software. The SAP environment is well understood at Terasen Gas with ten plus years of experience with the various products, the company, and the support ecosystem. With an SAP solution, fourteen separate interfaces with the existing CIS solution become redundant, significantly simplifying the overall solution while taking advantage of the integrated nature of the SAP solution. This also allows for the elimination of reconciling meter data between SAP and a separate customer system.

Terasen Gas is satisfied that SAP has a strong commitment to their product suite. It has a demonstrated track record of significant investment in R&D to stay abreast of the evolving needs of utility customers²². Terasen Gas also has the ability to leverage its existing SAP support infrastructure of servers and support personnel. It is this committed investment that allows for functionality and features to be inherent in the base product and continuously improving the product at no additional cost to Terasen Gas, except for those costs incurred if and when Terasen decides to take advantage of the particular feature. By implementing an SAP CIS, the functional requirements can be met, the future requirements identified can be met (at no additional cost of the software) and it is more cost effective than to replicate the entire infrastructure and support staff required for a different solution. The SAP CIS solution is the most cost effective solution for Terasen Gas. The SAP software is cost competitive and the total cost of ownership of an SAP CIS solution is lower than an Oracle solution for Terasen Gas as described above. Refer to Section 6 for the financial analysis.

With respect to the other two CIS software products considered, Terasen Gas concluded that the Oracle solution would be a solid solution to meet the future requirements of a CIS from a functionality standpoint. The determining factor that caused Terasen Gas to prefer a SAP solution was overall cost effectiveness. Although the price of the software was competitive with SAP, the costs associated with supporting a stand-alone CIS, without the ability to leverage from the existing infrastructure or support structures, and the added complexity of integrating a

²² According to SAP, the R&D investment in their suite of products is \$1.5 billion annually. The amount invested specifically in the Utility solution fluctuates from year to year but averages between 8% - 10% (i.e. \$120 - \$150 million annually).



separate system, which all contribute to a total cost of ownership higher than the proposed SAP solution, make it the less optimal solution for Terasen and its customers. Refer to Section 5 for the financial analysis. For the reasons previously described, Peace was not considered a viable option for Terasen Gas.

4.2 CIS Implementation and Maintenance Alternatives

This section addresses the strategies, alternatives, conclusions and recommendations for the implementation and ongoing maintenance of the CIS solution for Terasen Gas.

4.2.1.1 Alternative Implementation Strategies: Phased vs. Full Implementation

There are typically two alternative approaches to implementing a new CIS system: implementation in stages over time, also known as "phased implementation" and full implementation of all functionality at once. Terasen Gas has concluded that full implementation is preferable. The sub-sections below describe each approach, the advantages and disadvantages of each approach, and the rationale for Terasen Gas' selection of full implementation strategy.

4.2.1.1.1 Phased Implementation

The phased approach takes the implementation of a new system or process, in this case, the conversion from a legacy system to the new CIS system, one step at a time. The use of a phased implementation approach is very much dependent upon the nature of the project. The rationale for a phased implementation is to start small: either with limited functionality or with a limited number of people. After the initial implementation, any errors that were not caught in testing can be addressed and lessons learned with the initial implementation can be taken into account in the next phase of the implementation. This is repeated until the Project is completed. There are advantages and disadvantages to this approach.

4.2.1.1.1.1 Advantages and Disadvantages of a Phased Implementation

Below are the key advantages and disadvantages of a phased implementation approach:

Advantages:

- The implementation will be done in parts (phases). Time is available for adjustments to ensure subsequent phases are implemented smoother than during the previous phase.
- More controlled stabilization period. Regardless of how much training or testing conducted for a project, there will almost always be a period of disruption or loss of productivity for a period of time after the implementation of a new process of system. This is especially true if the change is significant. Problems that are encountered in a phased implementation can be confined to the group that encountered it and not the entire organization all at once.



• Technical staff can concentrate on part of the system or some of the users.

Disadvantages:

- Training sessions can be confusing for users as they are asked to learn the new and work with the old system at the same time while others, again depending on the nature of the new system, are required to work with both the old and new systems at the same time.
- Each phase can lead to a new issue that requires adjustments. This can lead to many changes in the documentation, training material and system that in turn need to be communicated to everyone utilizing the system. Depending on what implementation phase the project is at, this can lead to multiple changes being communicated to the same department multiple times potentially leading to confusion for employees who had already been trained and using the system.
- Potentially several changes in documentation depending on the nature of the adjustments required. If subsequent phases lead to changes in user or system documentation, the possibility of people not having access to the most current documentation could occur, leading to confusion and frustration of the end users.
- The duration of the project is much longer as each phase goes through an implementation and stabilization. This will result in a longer period of time before the full benefits of the new system can be achieved and in the cases where external resources are being utilized by the project, the project costs will be higher.
- Correctness and completeness of the dataset has to be checked several times as each phase is completed, which adds effort and cost to the overall project.
- In cases where third parties are contracted to deliver services and payments are based on deliverables, a phased implementation can make system delivery milestones unclear. As an example, if the milestone is "system implemented", is that milestone met with the first phase or the last phase? Contracts need to be structured to accommodate payments based on partial implementation which is more complicated to manage and not always easily accommodated depending on the third party.
- A 'fall back' to the old system becomes more difficult with the implementation of every new phase as the company becomes half implemented the new way and half the old way and depending on the nature of the project, can become impossible if a major error is encountered in later phases.

As illustrated above, a phased implementation approach can mitigate certain risks for a project that lends itself to a phased implementation but is not without its own disadvantages. Candidate



projects for a phased implementation need to be able to introduce discrete functionality or be repeatable on a group by group basis.

4.2.1.1.2 One-time Full Implementation

Not all projects are candidates for a phased implementation. The other project implementation strategy is the one-time full implementation. This is an implementation strategy of the instant changeover, when everybody associated with the new system moves to the fully functioning new system on a given date. With the one-time implementation strategy, the switch between using the old system and using the new system happens on a single date, the so-called instant changeover of the system. Everybody starts to use the new system at the same date and the old system will not be used anymore from that moment on. Projects that are candidates for this type of implementation are projects that cannot implement certain functionality gradually or cannot be isolated to a single group and repeated in subsequent phases. Projects that involve extensive changes to business processes that cross multiple business units or utilize a significantly integrated solution are prime candidates for a one-time full implementation.

4.2.1.1.2.1 Advantages and Disadvantages of One-time Full Implementation

A one-time changeover can have many advantages over phased implementation, but there are also disadvantages. They key advantages and disadvantages are outlined below.

Advantages:

- Training is only needed for the new method, not also for the changeover period that occurs when a company is running both the old system and the new system concurrently.
- User documentation does not need to be updated during the implementation process, because it happens in such a short period.
- The changeover is at one date and this date is clear for everyone.
- There are no special interfaces needed to be able to get used to the new system, because the new system is all there is.
- Benefits associated with the new system can be realized in a much shorter period of time.
- "Fall back" plans are clearer to define as everything is switched over at once. In the unlikely event a major error is encountered that can not be remedied; it invariably will be discovered early and can be planned for.

Disadvantages:

- There is no time for extra additions scope control must be rigorous and testing comprehensive. There is no opportunity to gradually address issues over time.
- The completeness and validity of the converted data is proved only in the pre-phases, but not in the whole system situation.



- Coordinating all implementation activities to happen on one moment is very complicated.
- The stabilization period could be longer. With a phased implementation as described above, problems encountered are limited to certain functionality or a contained group. Full project resources can be brought to bare, problems quickly remediated with limited impact to the overall business and incremental improvements are made to make subsequent phases easier. With a one-time implementation, all groups are impacted simultaneously, all problems are encountered within a short period of time and the stabilization period is typically longer than a phased implementation due to the conflicting priorities of the support group and the need to ensure changes made are accurate and well tested, all of which take time. ²³

4.2.1.1.3 Terasen's Preferred Implementation Strategy

Terasen's preferred implementation strategy for CIS will be the one-time full implementation. The determining factor leading to the recommendation is the nature of the solution. One of the key benefits of the SAP solution chosen is the integrated nature of the software. The system will be implemented to take full advantage of the end-to-end Meter to Cash process enabling capabilities. There is no way to implement certain functions in SAP and continue to use the existing Peace system without significant modifications to both systems – even if it could be done at all. Neither system could operate in that manner without significantly increasing cost, risk and complexity. The complexities associated with running parallel systems and call centres based on different technologies represents a significantly higher risk and cost than a well planned single focused implementation. Given the significance of the change, CIS system, billing processes and transfer of responsibilities to Terasen Gas staff in new locations, the one-time full implementation is the only logical implementation strategy for a change of this magnitude and represents the best opportunity for success.

4.2.1.2 CIS Implementation – Implementation Resourcing Strategy

The implementation of a CIS is a complex effort requiring many parties to contribute to the overall effort. As described in Section 2.3.1.2, the key to the implementation is an experienced team with a proven track record of implementing the chosen CIS solution.

There is no single company that has both the breadth of skills and the depth of knowledge of Terasen's current business processes, current SAP implementation, CIS implementation experience, and infrastructure implementation experience. The Terasen Gas CIS implementation resourcing strategy is to:

- Engage an experienced and qualified System Integrator to take a lead role in the CIS implementation.
- Engage additional third party expertise with specific skills to augment the System Integrator skills. These will be a combination of resources known to Terasen Gas through past projects, supplemented with specific skills required for the CIS implementation.

²³ This would also be true of an Oracle solution, albeit to a lesser extent given the extensive SAP implementation that already exists in Terasen Gas.



- Leverage existing internal resources where possible and prudent, so as to minimize the impact on the day to day business for the duration of the project.
- Hire additional Terasen Gas resources to work on the implementation with the intent to position those staff as the ongoing support team after go-live.

There is no other project implementation resourcing strategy that would be practical due to the size, nature, scope and integration into existing systems and processes required to implement a new CIS at Terasen Gas. The key alternatives evaluated to best execute the CIS implementation were around the choice of the System Integrator. The following sub-section discusses the alternatives considered for the System Integrator.

4.2.1.2.1 CIS System Integrator

Terasen Gas has chosen HCL Axon as the preferred System Integrator for its CIS implementation, following a comprehensive competitive selection process conducted with the assistance of external experts.

Terasen Gas engaged Micon Consulting, an independent consulting firm focused on the investor-owned and public sector utilities industry, to support the Company in the CIS System Integration evaluation process. Micon has conducted over 100 business case development and product vendor – System Integrator evaluations over the past twenty-two years. A key consideration in engaging Micon was that it does not promote or sell any software nor does it have a business relationship with any vendor who sells or integrates commercial software. Micon's role was to facilitate the RFP / RFQ process for System Integrators and to assist Terasen Gas with the development of the requirements and the evaluation criteria based on their extensive expertise.

Details on the evaluation process for System Integrators are provided in Appendix C. Briefly, the steps in the process were:

- Develop requirements and alternative solutions;
- Determine Software Vendor candidates;
- Conduct Detailed Product Assessment;
- Select System Integrator;
- Conduct Contract Negotiations.

Terasen Gas used a multi-phased short listing process to determine the recommended System Integrator. Using Micon as the facilitator of all communications between Terasen Gas and the SIs, an initial RFP was issued. Based on these responses, an initial shortlist was determined, and a more detailed Request for Quotation was issued. Based on the responses, a further shortlist was determined. Short-listed candidates made oral presentations. Once these presentations were concluded, Terasen Gas, with the assistance of Micon, combined the results gained through the system vendor evaluation (refer to Section 4.1 and Appendix C for details), the information provided by the SIs for the implementation of the respective solutions, and Terasen's approach for ongoing maintenance, to determine the ongoing operating costs and came to a recommended solution. Terasen Gas feels very strongly that all factors, capabilities



and costs associated with the software, the costs of the implementation of that software and the ongoing maintenance model must be considered in unison to fully understand the total cost of ownership for its CIS solution.

Terasen Gas believes that the evaluation process was robust, rigorous, and transparent to all parties. By using Micon as the single point of contact and facilitator of the process, Terasen Gas ensured that all parties received the same information, in the same manner, at the same time, and that no party had any advantage in terms of time or information over any other party. In the end, HCL Axon proved to be the best choice for System Integrator for the Project. Refer to Appendix C for details around the evaluation process and decision criteria.

4.2.1.2.1.1 Terasen Gas Resources

Terasen Gas resources will be required to provide leadership in the overall Project governance, and accountability for the design and success of the new solution. Terasen Gas will provide subject matter experts in the various functional areas. Terasen Gas has been utilizing and sustaining SAP software to support other business processes for over ten years. This proven expertise allows Terasen Gas to also provide supplemental technical expertise with the Terasen Gas environment, including the resources required to integrate the new CIS solution with other SAP components and other software systems used by Terasen Gas.

Terasen has established an experienced internal Enterprise Support and Delivery (ESD) group in which all of the current SAP support is provided. Given this group's deep understanding of how to manage an SAP system and in-depth knowledge of all the current business processes that integrate with a CIS solution, Terasen Gas will utilize those experts to ensure all the impacted business processes are modified and tested to take advantage of capabilities enabled by the SAP CIS solution. Terasen also intends to supplement its existing ESD group by hiring an incremental 10 internal FTEs to assist in the initial implementation and assume accountability for the ongoing maintenance activities once the system is implemented. Terasen Gas has learned from its experience over the past 10 years of using SAP that including, as part of the implementation team, the individuals who will be responsible for sustaining the system once implemented, is vital to provide the greatest opportunity for a smooth transition from project implementation to maintenance. The proposed approach ensures that the maintenance team is apprised of the decisions made at the time of implementation.

4.2.1.3 CIS Maintenance

The maintenance strategy planned by Terasen Gas influences the initial implementation strategy. The CIS maintenance model is a critical input into the overall decision regarding the optimal CIS software and how the selected software is implemented. As has been discussed previously, the capabilities and costs associated with the software, the costs of the implementation of that software, and the ongoing maintenance model must be considered in unison to fully understand the total cost of ownership for Terasen Gas's recommended CIS solution.

4.2.1.3.1 Terasen Gas' Experience with Application Maintenance

Terasen Gas has been outsourcing application support for over twenty years and has come to understand which applications lend themselves to third party support and which have proven to



be managed most effectively by internal staff. Terasen Gas has learned through experience that in the case of applications that require a deep knowledge of business priorities and processes, involving Terasen Gas employees is most beneficial. It ensures that end to end process knowledge is maintained, business changes are properly defined, the impact of the alternatives is understood, and business changes are implemented in the most cost-effective manner. Using internal staff allows Terasen Gas to maintain the appropriate balance of:

- numbers of people required to meet support level expectations of the business;
- control over cost of that support;
- control over the skills of the support staff and the working environment;
- flexibility to respond to changes required in the support model in a cost effective manner;
- leverage existing resources to support other initiatives without compromising day to day support.

It is Terasen Gas' experience that outsourcing arrangements providing that combination of benefits is more costly and less effective than using internal staff to deliver those attributes.

4.2.1.3.2 CIS Maintenance of an Oracle Solution

In evaluating an Oracle CIS solution, the key factors considered regarding ongoing maintenance were:

- A stand-alone solution. There would be no advantages gained in:
 - Streamlining of business processes through the inherent capabilities of a single application to support the entire end to end business processes of Meter to Cash including the integration to finance, field service management, meter management, etc.;
 - No reduction of interfaces;
 - No elimination of the need to continuously reconcile common data elements that existed in both systems as in the case with premise and meter data.
- No synergies with existing infrastructure.
 - A stand-alone Oracle solution will not allow Terasen to utilize any existing server infrastructure – everything from application to database servers would be required.
- No synergies in existing support staff.
 - With an Oracle solution, Terasen would not only require additional functional support but the technical support that exists for the current SAP footprint could not be leveraged to support an Oracle solution. This would have to be replicated for an Oracle support organization. Terasen has no existing Oracle application skills.

From an ongoing support perspective, Terasen believes that an Oracle solution is a sub-optimal choice given Terasen's current SAP based application architecture.



4.2.1.3.2.1 CIS Maintenance of an SAP solution

In evaluating an SAP solution, the key factors considered as it pertained to ongoing maintenance were:

- Already implemented at Terasen Gas. There would be significant advantages gained in:
 - Streamlining of business processes through the inherent capabilities of a single application to support the entire end to end business processes of Meter to Cash including the integration to finance, field service management, meter management, etc.;
 - Reduction in overall technical complexity. In implementing SAP there would be the elimination of 14 interfaces greatly reducing the maintenance effort required to support those areas;
 - The elimination of the need to continuously reconcile common data elements that exist in both systems today but will all be in a common system once CIS is implemented. An example of this is efficiency gain is the reconciliation of meter data.
- Synergies with existing infrastructure.
 - An SAP solution will be able to take advantage of existing SAP server infrastructure. An SAP CIS will be able to utilize the same database servers, applications servers, web servers, and business intelligence servers. These synergies will extend to the Production, Testing, Development and Training environments.
- Synergies in existing support staff.
 - Terasen has established an experienced internal Enterprise Support and 0 Delivery (ESD) group in which all of the current SAP support is provided. This group is made up entirely of Terasen employees. Over the ten year history of SAP in Terasen Gas, this group has established the processes, procedures and requisite understanding of Terasen's business processes to effectively and efficiently support the SAP environment. It is these processes and procedures that will be leveraged to provide a proven support structure for the new CIS. Also, by choosing an SAP solution. Terasen will be able to leverage existing skills and resources to reduce the incremental support requirements of a SAP solution. As illustrated in the diagram below, Terasen Gas has extensive experience in the successful implementation of new SAP functionality, upgrades of the SAP environment when required and the ongoing support of the SAP environment once the implementation is complete. It is this experience and successful track record that Terasen Gas has established that makes it confident that the implementation and ongoing support plan are sound and will be successful in providing superior support services and ensuring in-depth business process knowledge in the most cost effective manner.





Figure 4.2: History of SAP at Terasen

The vertical lines show major functional implementations over Terasen Gas' ten years of experience with SAP. The horizontal bars represent SAP version upgrades (the start of the bar represents the implementation of the upgraded version and the bar itself represents the duration that Terasen remained on that version). It should be noted that Terasen Gas does not undergo an upgrade as soon as the new version is available. Terasen will only undergo the cost of the upgrade if it is required to support specific functionality or is required to remain in a supported state.

- Terasen plans to add an incremental 3 technical support FTEs to augment the existing group to provide support for the SAP CIS. In the case of another solution, this number would double to meet the same level of support. In the case of functional support, Terasen is planning on adding 7 FTEs in the functional analyst role to support the CIS functions.
 - Terasen Gas can provide the expected level of support with so few additional staffing resources because of the integrated nature of an SAP solution, which simplifies overall support requirements as well as being able to leverage existing skills and knowledge. As an example, Terasen has been managing its meter fleet through SAP since 2000. A new CIS on a different platform would require additional resources to replicate and support this functionality as it would be inherent in the other solution and would have to be maintained. By implementing an SAP solution, this is not required. In discussions with other organizations who have implemented both SAP and Oracle solutions, the incremental 10 FTEs represents a much lower number than has been implemented in other organizations. Typically the number for a stand-alone CIS support model for a like utility has been closer to double the number proposed by Terasen.



Overall, Terasen believes that an SAP solution utilizing the successful and proven support structure will position Terasen Gas to take full advantage of its ten years of experience with SAP, the support structures, processes and procedures. This, in turn, will best support Terasen's future requirements.

4.2.1.3.2.2 Technical Infrastructure Support

Terasen Gas' data centre is located in its Surrey Operations Centre. Technical infrastructure support is currently provided to Terasen Gas by TELUS. This scope of services includes the management of servers (including the existing SAP infrastructure), desktops, network and help desk. It is Terasen's intent to incorporate the incremental technical support requirements of the CIS solution into the existing services agreement with TELUS. TELUS has provided Terasen Gas with all of the proven support structures, processes, procedures and resources required to manage its entire technical infrastructure and are a natural choice to support the incremental hardware and users of the new CIS solution. No other alternatives were considered as this service is not unique to a CIS and there is no value in separating this from the rest of the services currently being provided, specifically having two different parties managing different components of the same software solution. This Project will result in incremental volume to an existing services contract, no different than any other new application.

4.2.1.4 Conclusion

Terasen believes that the overall strategy and partners chosen to assist Terasen in the implementation of the CIS is proven through past experience, and positions Terasen for success in the implementation and ongoing support of a SAP CIS solution. The combination of SAP, internal resources, a strong network of additional third party support resources and a thorough evaluation of the alternatives for the key role of System Integrator provide Terasen and its customers with the optimum balance of demonstrated experience.

4.3 Call Centre

A critical feature of this Project is the move to an insourced call centre model. Terasen Gas believes it is in the best interests of customers and the Company for Terasen Gas to take direct control of this key customer interface. New technologies are also required to meet the changing needs and expectations of customers as well as to position the Company to move forward to more cost effective, multi-channel communications in the future.

The call centre solution proposed in this Application includes establishing two in-province call centre facilities to ensure that fully redundant failover is available for emergency call handling. Both centres will be equipped and staffed to ensure that all critical calls are handled by skilled resources in a timely manner.

In this section, Terasen Gas reviews the options available to meet its objectives of:

- Control of key customer facing business processes;
- A call centre technology platform that will keep pace with the industry and customer expectations; and



• A flexible work force and competitive cost structure to ensure changes can be made quickly and cost effectively in the future.

This section will discuss the alternatives associated with continuing to outsource the call centre function, the components needed to support an insourced call centre model and conclusions and recommendations for the implementation of an insourced call centre model for Terasen Gas.

4.3.1 Alternatives

Terasen Gas conducted a thorough assessment of call centre alternatives. The alternatives considered for addressing Terasen Gas' future call center needs included:

- A review of the implications of continued outsourcing, either to the current provider or through an alternate provider;
- An analysis of key drivers for an insourced call centre solution; and
- An evaluation of the options reviewed related to each component of the call centre. These components are:
 - *Staffing:* the staffing requirements, hiring strategies and compensation structure required to support the services
 - *Facilities*: the geographic locations, buildings, and sourcing options considered to meet Terasen's business needs
 - *Technologies*: the applications and infrastructure required to support call centre business processes.

4.3.2 Analysis of Decision to Insource

As discussed below, continued outsourcing was considered but was dismissed due to the limitations of the current outsourcing arrangement as well as the Company's belief that no outsourcing arrangement could provide the level of control and flexibility Terasen Gas requires to support call centre business processes. In order to be able to meet customers' changing expectations as well as take advantage of the benefits inherent in modern call centre technologies, Terasen Gas has determined that insourcing key customer-facing activities is in the best interests of customers.

4.3.2.1 Continue to Outsource Call Centre Services

The evolution of BPO outsourcing as well as a discussion of the current outsourced operating environment and associated performance issues are discussed in detail in Sections 2.2 and 3.3.

The current Client Services Agreement (CSA) was designed as a comprehensive meter to cash business process outsourcing arrangement. It was initially established by an asset transfer process, transferring the internal resources and technologies in place at the time of the agreement on January 1, 2002 to the outsourced provider. Very little has changed since 2002 in terms of additional value or functionality through the arrangement for either the Company or its customers. The expectation that the core assets transferred to the service provider would form a platform for attracting new clients which would result in additional benefits to customers has not materialized. This is one of the key learnings related to the early adoption of Business Process Outsourcing in the utilities industry.



Terasen Gas did not issue an RFQ to other third party outsource providers to obtain cost estimates for the continued outsourcing of all of Terasen Gas' customer care services as continuing with such a model neither meets the Company's business needs going forward, nor addresses the prevailing trends or practices of the utility industry. The customer care functions are currently wholly outsourced and this provides an indicator of the cost of continuing to outsource these services. Terasen Gas does not feel it appropriate to ask third party outsource service providers to go to significant time and expense to prepare a quotation in a context where Terasen Gas does not believe there is a reasonable chance that we would award the contract. As well, pursuing an RFQ in order to simply obtain benchmark costing in a context where Terasen Gas has decided to bring most of the services in house, raises potential impediments under the Client Services Agreement. Under the CSA, CustomerWorks LP enjoys a right of first refusal to match any quotation that Terasen Gas may choose for the provision of all of the services.

As applied to the call centre services in isolation, the CSA limits Terasen Gas' ability, other than through the scope change provisions of the agreement, to issue an RFQ for any discrete services that Terasen Gas might identify that are currently provided within the CSA's comprehensive suite of services. This limitation prevents Terasen Gas from considering other call centre providers to simply take over the business processes specific to the call centre. As discussed in Section 2.2, the change order process of the Client Services Agreement does support Terasen Gas' requirement to initiate changes related to call centre business processes.

4.3.2.2 Key Drivers for an Insourced Call Centre

The call centre business processes have the highest impact on the customer experience. They also offer the greatest opportunity for automation through self-service in the future. This is the area where changing customer expectations are most visible and where Terasen is lagging behind its peers in the utilities industry. In order to ensure ongoing service quality to customers, as well as provide the opportunity to benefit from changes in technologies and more streamlined business processes, this critical customer facing area must be managed internally by Terasen Gas staff.

The analysis and recommendations related to insourcing of call centre services was approached in three parts as described above: staffing, facilities and technologies. Each component was approached as a separate work stream to ensure that all viable options were considered and then reassessed as an integrated solution to ensure that the final recommendation is in the best interests of customers. The objective was to ensure the optimal mix of staffing, facilities and technologies to meet the current and future needs of Terasen Gas and its customers.

4.3.2.2.1 Staffing

The staffing requirements for the call centre were determined in consultation with experts. Terasen contracted with the Taylor Reach Group, an independent call centre consulting firm, to model the base call centre labour requirement using current call volumes and service metrics and the assumption of a traditional utility operating structure. The modelling performed by Taylor Reach Group resulted in a calculated workforce of 224 FTE's as indicated in the *In Province Contact Centre Strategy Report* attached as Appendix P.



Terasen Gas has subsequently revised the labour estimate for the call centre downwards to approximately 200 full time equivalent (FTE) employees. The difference between the preliminary staffing estimate of 224 and the current estimate of approximately 200 reflects the results of a negotiated collective agreement with COPE to support having these services performed in British Columbia. This agreement (filed in confidence with the Commission, but accessible to intervening customer groups) provides for scheduling flexibility and an overall compensation package that better represents the unique workforce characteristics of a call centre. The agreement also brings increased cost certainty to the forecasted operating cost of supporting this business area in house.

It is Terasen Gas' preference to site the call centre facilities within British Columbia. As reflected in our commitment to work with COPE to negotiate a market competitive compensation structure, the Company did not investigate the availability of acquiring facilities with a resident work force to assume responsibility for this function.²⁴ Also, given that the Company was looking for a commitment of resources more than two years in the future, Terasen Gas did not believe adequate cost certainty and a commitment of skilled resources could be achieved through this option.

The staffing levels included in Terasen Gas' analysis will ensure that the current call centre service metrics can be sustained, if not improved, going forward. The staffing estimate of approximately 200 FTE is based on conditions as they exist today, whereby the majority of interactions are handled through the telephone channel currently provided by the outsourced service provider.

In terms of employee skill set, Terasen Gas will be recruiting management staff and call centre agents who are skilled across all of the communication channels that are likely to be required in the future. As indicated in the "Special Report: Toward a Multi-Channel Contact Centre Email and Chat: Emerging Contact Centre Technologies" attached in Appendix M, the move to integrated inbound / outbound centres and the shift from traditional voice to more electronic channels is rapidly gaining momentum in the industry. Contact centre skills in the future will be different from the call handling skills required in traditional call centres, requiring a stronger focus on written communications skills. Today the number of email inquiries we receive is relatively low, but is increasing. Currently email responses are handled by a specialist group of customer service agents dedicated for this purpose.

The work environment in the Terasen Gas call centre will also be different than the average utility operating centre. As discussed in section 3.2.3, customers want to be able to interact with the Company when and how it suits their schedule. This will require interaction support across a longer workday and possibly through the weekends, for example. In order to support these evolving customer expectations, Terasen Gas expects that a portion of the call centre staff will be hired and scheduled as part-time employees. As customer communication preferences change, this staffing model will allow the Company to restructure to accommodate these changes. Additionally, as customers move to more self-serve options, staffing levels will be adjusted to ensure that customer needs are met more cost effectively.

²⁴ Resident Workforce: This refers to a pre-hired call centre skilled workforce that requires only client specific training.



The table below is a sensitively analysis of the potential impact on labour requirements and cost of labour of changes resulting from changes in customer preferences in communication channels. The analysis is based on a report prepared for Terasen Gas by the Taylor Reach Group *"Sensitivity Analysis"*, which is attached as Appendix Q. We have also assessed the impact of an increase in the standard average speed to answer service metric to better understand the impact of a change in this area in the future.

	Impact (FTEs)	Annual Impact on Labour Cost
Migrate to self serve IVR of Web	↓ 18 FTEs	↓\$ 900,000
Migrate to Email channel	↓ 12 FTEs	↓\$ 600,000
Migrate to Chat channel	↓9 FTEs	↓\$ 450,000
Increase in Service Level to 80%	∱5 FTE's	<u></u> ↑\$ 250,000
of calls answered in 20 seconds		

Table 4.1: Forecasted Impact of a Shift of 100,000 Inbound Calls

The potential benefits associated with the migration of customers to self serve and electronic communication channels are material. By including these skills in the hiring and training of new contact centre staff, the Company will ensure that these options are available to customers as soon after go-live as possible. Self-serve will also be actively promoted at go-live to facilitate the transition to the new system and operating environment.

Terasen Gas is a preferred employer in the province and aims to continue to provide an attractive compensation package designed to attract and retain skilled resources in the future. The new collective agreement negotiated with COPE is both flexible and market competitive and will support the current and future needs of the Company and its customers while providing cost certainty in the future.

4.3.2.2.2 Facilities

The second component considered in the alternatives analysis to support the call centre business processes is the facilities that would house the call centres.

The Company has determined that two call centre locations are required to support a fully redundant and geographically separate environment. One of the key services supported by the call centre is inbound emergency inquiries. As is currently the case, it is critical that Terasen have the ability to redirect calls to a fully equipped and skilled workforce in the case of a major interruption in service. To achieve this objective Terasen believes two sites are required with a minimum of 20% of all emergency calls being handled in an alternate location, ensuring that this unique skill set is maintained by staff in both locations. If the primary call centre site is unavailable or impaired, all emergency calls would be seamlessly redirected to the other site to ensure no interruption in service. The site and location analysis support Terasen's requirement for a fully enabled, real time disaster recovery site.

To determine the best location for the new call centre services a number of facility acquisition options were considered both in province and in western Canada. Terasen Gas did not actively research off shore locations because of the challenges associated with managing these



locations remotely. As well, the Company believes that regional knowledge is a significant factor in ensuring customer service quality.

The search for facilities was done in two phases. The first phase included a location assessment to determine which areas could sustain the operational requirements of the call centres. The second phase focused on building or site suitability in the areas prequalified through the first phase as being able to sustain a suitable call centre workforce.

Step 1: Location Assessment

Taylor Reach Group assisted Terasen Gas in assessing overall market viability. Market viability in terms of call centre refers to communities that have the characteristics necessary to support call centre business operations over the long term. These would include population, employable workforce, and unemployment rate, among other factors.

Taylor Reach produced two special purpose reports related to the physical call centre location: the *Market Location Report* and the *Turnkey Contact Centre Search Report* (Appendix R and Appendix S respectively).

The first report, the *Turnkey Contact Centre Search Report* addresses available call centre turn key or operational sites in Western Canada. The purpose of this investigation was to query markets in Western Canada to identify potential call centre sites with leasehold configuration and technology in place to support our call centre requirements, either through a purchase or lease arrangement at a lower cost than building or improving vacant space and implementing new technologies. As reflected in the report only BC and Manitoba have potential pre-built sites. The very low unemployment rates in both Alberta and Saskatchewan indicated unsuitability both in terms of available sites and an available workforce to support the services.

According to Taylor Reach Group, the currently available sites in BC and Manitoba in general have limited or no technologies in place to support Terasen Gas' operating requirements, so are not true turnkey alternatives. The sites identified are also being actively marketed today and the likelihood that this special use space would be available in its current condition to meet our targeted go-live date of January 1, 2012 is low. In some cases Terasen Gas would need to be able to commit to the space in the next month to be able to hold the space for the future. The sites identified also no longer have the technologies or furniture in place. Terasen Gas would still need to acquire and implement the furnishings and technologies required to support the services. Based on this analysis of the Taylor Reach Group, the turnkey option was eliminated from further consideration.

The second report prepared by Taylor Reach Group was a *Market Location Report*. The purpose of this report was to examine markets in Western Canada to assess their ability and interest in supporting Terasen Gas' call centre requirements in the future. Through discussions with provincial agencies and contact centre associations and researching publicly available information, Taylor Reach Group contacted the four western Canadian provincial jurisdictions and gathered details on available markets in each of the provinces. Each of the identified markets was then contacted and asked to participate in a survey process to determine their interest and ability in supporting call centre services. The responses from Alberta and Saskatchewan confirmed their inability to support new call centres. Taylor Reach Group identified a list of potential candidates from those markets that chose to respond to the survey.



The responses were scored based on a predetermined set of criteria focusing on workforce availability, current call centre density in the area, and overall municipal interest in supporting a new call centre. The results were further segregated into possible locations for both the primary centre as well as a secondary centre that would be available as a real time failover site in the case of a disaster. The analysis resulted in the following recommendations.

Primary site (large market)

- Surrey
- Winnipeg
- Maple Ridge

Secondary site (small market)

- Vernon
- Prince George
- Port Alberni

These independent results were further refined by Terasen Gas' internal criteria which included:

- Capital acquisition cost
- Ongoing O & M cost to maintain the facilities
- Potential labour considerations including attracting and retaining a skilled and cost competitive work force
- Company presence preference to locate within Terasen Gas' service territory
- Accessibility of the location
- Proximity to Supporting Company business process owners

Terasen eliminated Winnipeg from further consideration as the large market site because of proximity. Given the market competitive labour agreement that Terasen Gas has negotiated with COPE, there are no material labour cost savings associated with an out of province solution. For the secondary site Terasen Gas eliminated Port Alberni from further consideration. This site has neither a material Company presence, nor is it as accessible as other areas under consideration.

The next step after arriving at an understanding of the capacity and interest of the respondents to the location assessment survey was to assess the availability of specific sites.

Step 2: Site Availability Review

The site availability analysis accounted for the various acquisition options for the two facilities, which included:

- Building new facilities on existing Terasen Gas owned property;
- Identifying for lease or purchase Turn Key call centre sites (pre-built call centre space);
- Buying suitable existing land and /or buildings to be configured specifically for call centre use; and
- Entering into long term lease arrangements for space in existing facilities.



Terasen Gas has insufficient existing land that is appropriately zoned to support the construction of call centre facilities either in the Lower Mainland or the interior of British Columbia. The option of building on existing Terasen Gas-owned property was therefore eliminated from further consideration.

The two final options reviewed were:

- Buying suitable existing land and /or buildings to be configured specifically for call centre use; and
- Entering into long term lease arrangements for space in existing facilities.

Terasen engaged an experienced real estate firm, CB Richard Ellis, to assess land and building availability to accommodate these last two options. The broker queried the markets of interest identified in the market location study and identified potential sites for call centre operations to either buy or lease. The number of buy options supporting the building size Terasen Gas requires is limited, particularly in the Lower Mainland. In the BC Interior there are more options available for both purchase and lease.

Based on the analysis conducted, the only potential site available to build a new facility of sufficient size to house a call centre is located in Kamloops. In fact, this site is sufficiently large to support all call centre capacity needs, but as previously discussed this would not meet Terasen Gas' critical requirement of having two call centre locations to support disaster recovery. The cost to acquire and build on this site to support only one of the two call centre locations was prohibitive. As a result, Terasen Gas rejected this option.

In terms of building purchase there is one site in the Interior that would accommodate Terasen Gas' requirement for a secondary site at a reasonable cost. Although this site was previously utilized as a call centre, the space is not configured adequately for use by Terasen Gas. It would, however, provide an appropriate shell. The leasehold improvements required would be reasonable based on the strength of the core structure. Terasen Gas is recommending this as the secondary call centre site.

Due to a very competitive real estate market, the Company was not able to identify a cost effective property or building for purchase in the Lower Mainland. The Lower Mainland remains the preferred site for the primary centre as it provides the greatest opportunity to attract and retain skilled resources. Although there are other locations in the province that could support the primary call centre as a standalone facility, Terasen Gas is intending to also house billing and back office operations in the same location. The importance of housing billing and back office operations in the same facility is discussed in Section 4.4 of this Application. Through our assessment of suitable locations to support approximately 90 billing and back office staff, and the skill set required, Terasen Gas has determined that a Lower Mainland location is optimal. A leased site has been identified in the Lower Mainland and is being recommended as the best option available for the primary centre.

Terasen has contacted the building owners of the selected sites and has submitted conditional offers as reflected in the overall facilities costs discussed in Section 6. These offers are subject to Terasen Gas being satisfied with the results of a building inspection as well as Commission approval. As the Company is still in negotiations with the building owners, the specific details of these negotiations are confidential. Negotiations are expected to be completed shortly and the



details will be provided at that time. The costs discussed in Section 6 represent the most likely outcome of these negotiations.

In summary, based on a very competitive real estate market and our ability to attract and retain skilled labour, Terasen is recommending that the primary call centre location be in the Lower Mainland, facilitated through a long term lease arrangement. The Company is proposing that the secondary site be located in the Interior where we have identified a cost-competitive building for purchase, which can be equipped and configured to Terasen Gas' specifications at a reasonable cost.

4.3.2.2.3 Technologies

Call centre technologies have evolved significantly over the past 10 years to become integrated interaction product suites, capable of addressing emerging customer preferences for self-serve and electronic communications channels such as e-mail and chat. These applications are now capable of providing seamless support for multichannel communications and complement the functionality of the CIS. The breadth of the communication channels serviced by these newer technologies has facilitated the transition from the traditional "call centre", with telephone as the dominant communication channel with customers, to what might be more appropriately characterized as "interaction centres". Two significant and related drivers for Terasen Gas in selecting a new technology suite as part of insourcing the call centre function were (i) to ensure that the technologies selected will support future changes in customer preferences; and (ii) to retain the opportunity to realize cost savings in the future as customer preferences move towards more cost effective communication channels.

Leading call centre technologies are generally comprised of a comprehensive suite of applications that support multichannel customer interaction. The specific applications that are included in the proposed call centre technology solution include:

- Telephone switch / Automated Call Distribution (ACD)
- Interactive voice Response (IVR)
- Workforce management
- Outbound dialler
- Call recording and quality monitoring
- E-mail management
- Online chat

Terasen Gas initiated a comprehensive Request for Quotation to key call centre technology providers in the marketplace, which included companies offering both all-in-one solutions and niche providers for specialist applications. A copy of the Request for Quotation is attached as Appendix T. The telephony providers were asked to respond to both the telephony / ACD requirements as a standalone implementation and/or to provide an alternate response for the entire suite of products if they had a comprehensive solution that met Terasen Gas' detailed functional requirements for each specific application. Our expectation was that the telephony providers would likely be able to provide most of the functionality and that the specialist applications would only need to be considered if there were significant functional gaps or if there were significant functional advantages available at a reasonable cost.



In response to the Request for Quotation issued to the telephony / ACD providers, the Company received four responses from providers capable of providing all or most of the functionality required. Based on selection criteria including functional fit, price, implementation approach, and vendor viability Terasen short listed to two vendors. These two vendors were invited to participate in a vendor conference in which they were given the opportunity to demonstrate the functionality and usability of their product suite as well as to articulate their capability to implement and support the technology solution going forward. It was also determined through this process that both of the short listed integrated solutions satisfied Terasen Gas' complete functional requirements and were capable of meeting Terasen's current and future business needs. The specialist responses added significant additional cost to the overall solution without providing materially greater functionality. The cost of ongoing sustainment was also higher with the inclusion of different complementary technologies. The specialist options were therefore eliminated from further consideration.

The evaluation criteria upon which the selection of call centre technology was based included:

- RFQ compliance (Pass / Fail)
- Ability to meet the mandatory business requirements outlined in the RFQ (Pass /Fail)
- Requirements suitability
- Overall approach
- Vendor viability
- Sustainment and Maintenance Cost
- Implementation Cost

Of the telephony / ACD providers that submitted quotations, Terasen determined that three of the four were fully compliant with the RFQ and had the ability to meet the mandatory business requirements defined in the RFQ. The highest quotation was eliminated as not being price competitive. Aspect Software Inc.'s Unified IP call centre suite was selected as the best combination of functional fit, implementation approach and cost. Aspect's Unified IP Call Centre solution will support all of Terasen's call centre requirements in the future and was the lowest cost alternative. Aspect's response has been submitted to the BCUC in confidence, including the final price quotes for the required components.²⁵ The pricing is included in the financial schedules in Section 6.

4.3.3 Summary of Conclusions

Terasen Gas performed a thorough alternatives analysis to determine the best business model to support the meter to cash processes currently provided through a BPO outsourcing arrangement. The Company's qualitative analysis considered the opportunities available to Terasen Gas, within the parameters of the current contractual arrangement with CustomerWorks LP. After reviewing the merits of continuing to outsource call centre operations under a comprehensive BPO arrangement as well as the alternatives that would be supported under the CSA, Terasen Gas eliminated these alternatives and focused on the options and alternatives associated with an in-house operating model.

²⁵ The information contained in the quotation is considered to be commercially sensitive.



The three components of the insourced call centre solution were analyzed in terms of value to customers, including both service quality drivers and long term value.

Staffing: Terasen Gas will recruit and train a skilled in-province labour force to support the call centre function. To ensure this is cost effective for customers, Terasen Gas has negotiated a flexible and market competitive labour agreement.

Facilities: In order to ensure a fully redundant emergency response centre, two geographically separate call centre locations are required. After a comprehensive review of land and building purchase options, including available pre-built space, and a review of available lease options, the Company is recommending that the primary call centre site be located in leased facilities in the Lower Mainland. The secondary site will be located in a purchased facility in the Interior. The combination of these two sites provides the best and most cost effective solution for customers.

Technologies: After a comprehensive RFQ process, the Aspect Software Inc. Unified IP call centre technology solution was selected as the most cost effective option meeting all of Terasen Gas' mandatory functional requirements for this application and representing the lowest cost quotation.

In summary, Terasen Gas believes that the overall call centre proposal represents a cost effective means of addressing the functional requirements necessitated by evolving customer expectations.

4.4 Billing and Back Office Operations

The most complex business processes in the overall Terasen Gas customer care delivery organization are the meter to cash processes supported by billing and back office operations. These processes require the greatest depth of Company and industry specific knowledge. Billing and back office operations, as referred to in this Application, include the work related to back office billing for both mass market and industrial customers, exception handling²⁶, complex billing²⁷, payment processing, meter reading, active credit and collections. Billing and back office operations also include a broad range of third party agreements that support specific business processes, for example statement printing. Terasen Gas has undertaken an analysis of the various options available for billing and back office functions, which are described below. Terasen Gas has concluded that the optimal solution for these functions is a mix of insourcing and outsourcing. Outsourcing is the best option for customers and the Company to support billing and back office operations functions where business processes are characterized by high volume, low complexity processing and require specialized equipment. In areas where specific utility process knowledge is necessary or where direct access to CIS is required, Terasen Gas will insource those business processes. These requirements will be met by a stable and sustainable billing and back office work force with a strong background in utility business processes, specific gas industry knowledge and an understanding of local and regional market

²⁶ Exception Handling is the manual process of reviewing transactions out of acceptable tolerance i.e. high meter readings, high invoices etc.

²⁷ Complex billing in this context refers to multi-meter and high pressure installations generally requiring specialized equipment at the customer's premises.



conditions impacting customers. Through a prudent combination of insourcing and outsourcing of the billing and back office functions, Terasen Gas can deliver the best value to customers.

This section will discuss: the alternatives associated with continuing to outsource billing and back office operations; the components needed to support an insourced model for billing and back office operations; and the conclusions and recommendations for the implementation of an outsourced model for Terasen Gas.

4.4.1 Analysis of Decision to Insource

The alternatives considered related to billing and back office operations included a review of the implications of continued outsourcing either to the current provider or through an alternate provider. Analysis related to the current outsourcing agreement is discussed in detail in the call centre outsourcing discussion in Section 4.3.2.1.

4.4.1.1 Parameters on Outsourcing Billing and Back Office Operations

As applied to billing and back office operations in isolation, the CSA limits Terasen Gas' ability, other than through the scope change provisions of the agreement, to issue an RFQ for any discrete services that Terasen Gas might identify that are currently provided within the CSA's comprehensive suite of services. This limitation prevented Terasen Gas from considering other billing and back office opportunities.

In any event, research indicated that billing and back office operations for the utility industry is not a standard service offering for Business Process Outsource providers as a separate service offering. These functions are generally bundled with call centre services if they are going to be outsourced. The business process overlap between the back office and call centre operations supports an operating model that addresses these operating areas as a group. The advantages of insourcing billing and back office functions are discussed next.

4.4.1.2 Key Drivers for Insourced Billing and Back Office

In order to ensure ongoing service quality to customers as well as the opportunity to leverage the operational expertise of the Company and maximize the value of systems and business process integration through the SAP IS-U/CR&B, Terasen Gas is proposing to support billing and back office operations in-house. There are two principle reasons for this.

First, the business processes in this area are among the most complex processes in Terasen Gas' meter to cash environment. The quality of service in these areas is impacted by a high degree of end to end business process alignment with core utility operations. In particular, complex and industrial billing require close co-ordination with the Company's Operations and Marketing departments. These functions also require specialized skills and a depth of Company knowledge and gas industry knowledge that is not generally available in an outsourced arrangement. This type of knowledge can best be provided by a work force trained and managed by the Company.

Second, there are significant operational synergies in having the billing and back office staff in the same location as the primary call centre. The ability to easily escalate complex issues from the call centre to the billing area generates knowledge transfer between these two groups and provides a higher quality of service to customers. This environment will also enable work force retention by providing opportunities for staff to migrate between these two areas depending on their work preference. In this way, the decision to insource the call centre also informs the decision to insource the billing and back office functions.

4.4.2 Components of Billing and Back Office

Within the context of an insourced solution for billing and back office operations, four separate components were considered. The four components are:

- *Staffing*: the staffing requirements, hiring strategies and compensation structure required to support the billing and back office operational services.
- *Facilities*: the geographic locations and buildings needed to meet Terasen's business needs in this area;
- *Technologies*: the applications and infrastructure required to support billing and back office business processes;
- *Strategic Sourcing*: the outsourcing of those services characterized by high volume, high speed processing using repetitive processes and/or specialized tools;

The discussion in section 4.3 relating to the call centre, particularly with regard to staffing and facilities, also applies to the billing and back office functions. The following discussion thus only includes information not previously covered in the call centre section.

4.4.2.1 Staffing

The first of four elements considered was staffing.

To support Terasen Gas' current and future back office billing requirements, an estimated labour force of 90 full time equivalent employees is required. We believe this is comparable to the current workforce in place to provide the services through the outsourcing arrangement. As we work through the CIS blueprinting phase of the CIS project, the future business processes will be designed and documented. Given the inherently rich functionality available in the SAP CIS system, Terasen Gas is expecting that future business processes will be driven by the configuration decisions made in the blueprinting phase of CIS implementation. At the completion of blueprinting we will re-evaluate the proposed staffing levels and expected skill set of the resources required to support these functions. Terasen is anticipating efficiencies in business process as a result of an integrated SAP solution and does not expect staffing levels to increase through this process.

Billing and back office operations is the area of the meter to cash process that benefits the most from a stable and experienced work force. Specialized gas billing knowledge is essential in supporting the timely resolution of complex billing issues. Company control over these



processes will allow Terasen Gas to more quickly identify issues and opportunities. At the time the billing and back office work was originally outsourced in 2002 all of the complex billing work was supported in British Columbia with long term Company staff. Over the years as work was relocated to other operating centres, including offshore locations, the level of knowledge related to this work has declined.

Key to the successful handling of complex billing work is a skilled workforce characterized by low turnover. There is no quick way to gain the years of experience required to handle complex billing and metering in a utility environment. Terasen believes it is well equipped to recruit and develop the staff required to sustain a quality level of service for customers. An in-house operating model will benefit from a base level of Terasen Gas knowledge to start this development process. Terasen, as a preferred employer, will be able to retain skilled employees by providing opportunities within the larger organization to help staff in this area develop long term careers with the Company. The billing area is also expected to attract interest from other parts of the larger Terasen organization for those existing employees with an interest and background in billing and customer care.

The flexible and market competitive collective agreement that has been negotiated with COPE (filed in confidence with the Commission, but accessible to intervening customer groups) will also cover the new employees in billing and back office operations. This new agreement reflects the changing business needs of the organization and provides a market competitive and cost efficient platform to support these specific utility business processes. The agreement also brings increased cost certainty to the forecasted operating costs of supporting this business area in-house.

4.4.2.2 Facilities

As responsibility for the billing and back office functions moves to an in-house support model, the work location for these functions needs to be addressed. Due to the integrated nature of the new CIS application across all Company operations, the business processes related to billing and back office operations are best supported through direct relationships with TGI's operations functions and the call centre. Work location proximity that facilitates ongoing interaction between departments will enhance our ability to both address issues and identify and implement opportunities for improvement or increased efficiencies.

In terms of location, Terasen Gas believes that the largest available work force to draw from for billing and back office resources is in the Lower Mainland. The jobs defined for billing and back office operations are more complex and require strong accounting, finance, and negotiating skills.

The fragmented operating model in place today that separates the call centre from billing and back office operations results in limited understanding related to the handling of billing exceptions including high bills and extended billing periods. This negatively impacts customer experience in the call centre. For example, complex billing adjustments processed in the back office are difficult for a call centre agent to explain to a customer if the agent does not have indepth knowledge of the billing process.



Terasen Gas does not have current excess capacity to house the approximately 90 full time staff required to perform this work. The Company believes however that there is significant value in having the billing and back office work performed in close proximity to the call centre. The search for facilities described in Section 4.3 related to the call centre also accounted for Terasen Gas' preference for the billing and back office functions to reside in the primary call centre facility. As such, these activities will be housed in a leased facility in the Lower Mainland.

4.4.2.3 Technology

Billing and back office functions are primarily supported by the Company's CIS. Sections 4.1 and 4.2 above describe in detail the process Terasen Gas employed to arrive at its decision to move to SAP as the new CIS platform. The CIS is the foundation on which the future billing and back office business processes will be designed. It is also the primary tool supporting the Company in reacting to changes in the market place as well as changing customer expectations or in proactively looking for and implementing new opportunities. In the future, business processes will be determined by the configuration of the new CIS. Control over the CIS application and the resulting business processes will provide maximum flexibility to support change.

Terasen is proposing to support the application internally, expanding on current in-house expertise related to sustaining SAP applications. This will create a more agile operating environment going forward.

4.4.2.4 Strategic Sourcing

Terasen will continue to outsource those billing and back office functions that had historically been outsourced and which continue to provide financial benefit to customers. Terasen Gas will repatriate the more complex work that requires specific Company or gas industry expertise. The analysis employed in reaching this conclusion is summarized below.

The table below summarizes Terasen's proposed approach to specific functions in moving from BPO to a Strategic Sourcing model. Those areas that have traditionally been outsourced to specialty providers will continue to be outsourced as indicated below. Additionally the current manual meter reading services provided by CustomerWorks LP will remain outsourced for as long as the joint meter reading arrangement with BC Hydro continues to be beneficial to customers.



	CSA Service Schedule	Current Scope of Services	Future Approach: Insource	Future Approach: Strategic Outsource
1.	Schedule B – Billing Support Services	 Statement print and mail Bill exception handling Complex billing set up and maintenance Management of bill messages and inserts Remittance processing Rate / price set up and maintenance CIS system maintenance and ongoing sustainment 	 Bill exception handling Complex billing set up and maintenance Management of bill messages and inserts Rate / Price set up and maintenance CIS system maintenance and ongoing sustainment 	 Statement print and mail (for both mass market and industrial customer accounts) Remittance processing (for both mass market and industrial customer accounts)
2.	Schedule C – Meter Services	 Meter reading Initiation of customer service fieldwork Follow up on complex metering exceptions Manage premise and meter access processes 	 Initiation of customer service fieldwork Follow up on complex metering exceptions Manage premise and meter access processes 	Manual meter reading will continue to be outsourced under the current agreement
3.	Schedule D – Credit and Collection Services	 Active collections processing. customer credit scoring, securitization of new customer accounts and oversight of payment arrangements Finalized account processing including overseeing the placement of debt with external agencies Recovery and reporting of payments against bad debt balances. Management of gas availability related to consumption on vacant premises. 	 Active collections processing. customer credit scoring, securitization of new customer accounts and oversight of payment arrangements Recovery and reporting of payments against bad debt balances. Management of gas availability related to consumption on vacant premises. 	Finalized collections activities will continue to be outsourced to third party collection agency as has been Terasen's practice historically.
4.	Schedule E – Industrial and Off System Support Services	 Set up and maintenance of industrial customer contracts including establishing negotiated terms and conditions. Handles billing exceptions and volume reporting related to daily 	 Set up and maintenance of industrial customer contracts including establishing negotiated terms and conditions. Handles billing 	

Table 4.2: Terasen's proposed approach to Customer Care



 metered industrial accounts. Negotiation of payment security and early stage collections for industrial customers and marketers. 	 exceptions and volume reporting related to daily metered industrial accounts. Negotiation of payment security and early stage collections for industrial customers and marketers.
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Terasen believes that there is significant value in continuing to outsource in those areas where specialized equipment or tools are required and where the volume of transactions is large. These are also areas where the outsourcing providers do benefit from economies of scale as they are able to reuse specialized equipment and processes across a wide range of clients. In Terasen Gas' case, these are also areas that do not have a direct customer interface but rather serve as supporting functions. The specific areas that are and will continue to be outsourced are listed below:

- Statement print and insert;
- Canada Post mailing;
- Specialty stationary and letterhead print;
- Remittance processing;
- Credit card payment processing;
- Inactive or bad debt collections;
- Electronic bill presentment;
- Call centre translation services;
- Braille print services;
- New customer credit validation;
- Manual meter reading services; and
- Customer service fieldwork related to arrears and vacant premises.

The list of business processes that Terasen Gas will continue to outsource is representative of the functions that are most commonly outsourced in the utilities industry. A recent article published by UtiliPoint, a leading independent Energy Industry research and consulting firm from whom Terasen Gas sought advice on appropriate customer care models, reported that over 72% of utilities have either outsourced a customer care function or are planning to outsource a customer care function in the next two years. While the percentage of utilities that outsource continues to grow, utilities are becoming more selective in what they are willing to outsource. Figure 4.3 below is based on the results of a 2009 survey of over 200 utilities in North America²⁸. The functions that have the highest adoption rates for outsourcing are not unlike those that Terasen has and will continue to outsource.

²⁸ Outsourcing's Growth in the Utility Industry. Christopher Perdue. UtiliPoint International Inc. July 22, 2009. Note: A similar chart in Appendix B reports functions being outsourced as reported by UtiliPoint in 2008.



Figure 4.3 – North American Utility Functions Being Outsourced in 2009

Source: UtiliPoint[®] International, Inc.

EBPP refers to Electronic Bill Presentment and Payment Processing.

4.4.3 Summary of Conclusions

Terasen Gas performed an alternatives analysis to determine the best business model to support the meter to cash processes currently supported through a BPO arrangement. A detailed discussion of the options and limitations of continuing to outsource is provided as part of the call centre analysis is Section 4.3.

The four components of the largely insourced solution for billing and back office operations were analyzed in terms of value to customers, including both service quality drivers and flexibility in meeting customers changing expectations. The Project will involve, in summary:

Staffing: Terasen Gas will recruit and train a skilled in-province labour force to handle the complex utility functions required in billing and back office operations. The overall model, which includes in-house call centres, will facilitate an integrated customer-facing operating environment. It will result in improved service quality for customers, including more timely and accurate issues resolution. Terasen Gas has negotiated a flexible and market competitive labour agreement that covers both of these operating groups. The agreement allows migration of skills between the call centre and back office to improve customer experience with the Company.

Facilities: With a skilled work force of approximately 90 staff required to support billing and back office operations, Terasen Gas believes that the Lower Mainland provides the greatest resource pool from which to draw these resources. As discussed in the call centre analysis in Section 4.3, a Lower Mainland site has been identified that will provide



a cost effective location to house the operating needs of both the call centre and billing and back office operations.

Technologies: The key technology required for billing and back office operations is the CIS system. This is discussed in detail in Sections 4.1 and 4.2 of this application.

Strategic Sourcing: Terasen Gas will continue to outsource the more transactional business processes where there is a need for high speed, high volume processing requiring special tools and equipment and where these functions can be supported more cost effectively by a third party.

Terasen Gas believes that the proposed billing and back office arrangements are in the best interest of customers and the Company.

4.5 Future Terasen Gas Customer Care Model

In response to our changing business environment, evolving customer needs and the evolution of utility customer care outsourcing, Terasen Gas has consulted with third party experts and, as discussed in the previous sections, evaluated alternative options for our customer care delivery model as we move forward. Below, we summarize the results of the alternatives analysis, followed by a discussion of the benefits that the Project will yield.

4.5.1 Summary of Alternatives Analysis Results

We have concluded that a strategic change to insource the key elements of the Company's customer care function, including ownership and control of a new CIS, represents the best solution to meet our changing business needs and the needs of our customers. Terasen Gas will continue to outsource certain specialist functions such as payment processing and statement print. Terasen Gas will initiate this change pursuant to the scope change provisions within the Client Services Agreement approved by the BCUC in Order Number G-29-02.

There are several reasons why the Strategic Sourcing customer care delivery model is the best model for Terasen Gas and Terasen Gas' customers:

- Direct management and ownership of the customer experience will provide Terasen Gas with the ability to more effectively and efficiently ensure service quality for customers in a timely fashion;
- In-house management of call centre and billing staff will ensure representatives have appropriate product and service knowledge combined with regional understanding. Representatives will also be able to relate to customer needs and experiences specific to Terasen Gas' service territory and the Company's product and service offerings and apply that understanding when working with customers. With direct ownership and control over staff training and ongoing performance management, we will have the ability to build key knowledge and understanding within our billing and call center agents that



will give them the tools to apply appropriate judgment when working to address a customer inquiry or concern;

- Direct management of call centre and billing and back office operations will also allow for greater flexibility in developing and implementing future service changes and ensuring issues and opportunities are addressed in the timeliest manner possible. The Company will also be able to identify opportunities more proactively and implement these opportunities to benefit the Company and our customers;
- The Terasen Gas owned and operated integrated CIS solution will result in greater control over end-to-end business processes that will be managed internally using the Company's own resources. This will enable better understanding across functional areas to support process changes more proactively with a more complete understanding of the downstream impacts of these changes on other operating areas. It will also ensure that Terasen Gas can better respond to the needs of various customer groups. The Company will have control over how the system is maintained and what support processes are in place. The Project will ensure implementation and configuration decisions are made to support the greatest flexibility in the future. By understanding the nature of each change from an application perspective the Company can ensure that changes are addressed in the most cost effective manner;
- The new CIS, the SAP IS-U/CR&B product, integrates with the Company's existing SAP enterprise application architecture and will leverage existing knowledge and experience related to the existing broader suite of SAP applications;
- The acquisition of a current call centre suite of technologies is foundational to being able to support multiple communication channels in the future including self serve and electronic communications channels such as e-mail and online chat through an integrated product suite. Not only are these channels becoming standard in the Utility industry for companies of our size, there are significant potential cost savings as customers move to lower cost interaction channels.

The Strategic Sourcing customer care delivery model will allow Terasen Gas to control the business processes, key technology platforms and staff required to provide quality customer service in the future. This cannot be achieved through BPO outsourcing.

4.5.2 Future Customer Care Model Benefits for Customers and British Columbians

This strategic change will bring benefits to Terasen Gas customers and the province of British Columbia in four areas.



- Functional benefits, which will provide customers with: better access to information; more communications channels to interact with the Company; increased self serve options through the IVR and the Web; and improved billing and payment capabilities.
- Control over key technologies, which will allow Terasen Gas to identify opportunities for business process improvement as well as technology changes to support service improvements and cost efficiencies to the benefit of the Company and its customers.
- Service quality improvement in terms of a more detailed and adaptable quality scorecard that can be adjusted to respond to changing customer expectations.
- Societal benefits resulting from the creation of approximately 300 new jobs in province to support those functions that will be performed in house by Terasen Gas staff.

These benefits are discussed, in turn, below.

4.5.2.1 Functional Benefits

The implementation of this Project will position Terasen Gas to provide overall improvements in its customer experience. This is facilitated, in part, through the acquisition of two technology platforms, the SAP IS-U/CR&B Customer Information System and the Aspect Unified IP call centre technology suite. The table below illustrates examples some of the functional capabilities associated with these technologies that will provide benefit to customers.

Table 4.3: SAP	Functional Benefits
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Customer - Special Interest	• Expanded support for capturing landlord and owner information with the ability to default the service into the name of the landlord or owner in the event of vacancy.
	• Ability to capture and track alternate customer relationships for an account i.e. care giver, government agencies etc. to support secondary contacts for "at risk" customers.
	 Ability to support multiple names on an account i.e. roommates, spouses to reflect shared liability.
Premise	• Ability to capture end use details including load information, appliance details and program participation which will support improved handling of high bill and consumption inquiries as well as customer education related to load analysis and conservation options.
	• Ability to track additional Company equipment at a premise to support complex inquiries related to metering as well as opportunity in the future to implement and track equipment related to automated meter reading.
Billing	• Expanded electronic bill presentment options through tracking of special purpose e-mail addresses.



	Support for "Best Rate" analysis for qualifying customers.	
	• Support for mass rate refund processing in the case of interim rates.	
	• EPP - Ability to process mass adjustments to EPP instalment amounts to reflect material changes in rates as they are approved.	
	• Support for time of use rates in the future should this become a requirement.	
	• Greater flexibility related to tax configuration to support changes to tax applicability and structure and a clearer statement presentation of these taxes to the customer.	
	• Enhanced "business to business" transaction support for billing and payments including.	
	 Increased flexibility related to group or consolidated billing including support for "data file billing" rather than traditional statement print. 	
	 Support for customer initiated electronic payments. 	
	 Ability to provide billing data to third party bill aggregators and provide multiple bill copies at customer request. 	
Marketing	• Ability to identify customers and premises for participation in marketing programs as well as processing enrolments and generating credits to accounts in the form of rebates.	
	• Ability to target accounts for rate review automatically to move customers to the best qualifying rate.	
Web	Auto-logging of e-mail correspondence within the CIS application.	
	• Potential for increased customer access to online transactions as any transaction in CIS could be opened to the web. This will provide customer with 7 X 24 access to a wider range of functions.	
	 Enhanced ability to download account and consumption information from CIS. 	
	Greater support for e-commerce including electronic billing and payment processing.	
	Ability to use the web to support customer initiated usage and rate analytics.	
Customer	Customer Choice program participation including enrolment details will	



Choice	be housed in CIS and will be available to call handlers as well to customers via the web.	
Call Centre	• Support for integrated communication channels including voice, email and online chat. All interactions will be handled via inbound call queues and the results captured in CIS.	
	• Enhanced IVR capabilities to support increased customer self-serve which could result in lower overall cost to serve as well as expanded hours of availability related to these functions.	
	• Support for integrated outbound calling either in response to a customer request for a call back or proactively to advise customers of significant and likely unexpected changes to their bill.	
Integration	 Use of SAP will provide integrated refund processing for customers requiring cheques related to final credit balances. 	
	 An integrated SAP solution will also support real time updates for fieldwork status in CIS to better respond to customer inquiries related to on site work. 	

The examples above illustrate some of the functional benefits that will be enabled through the Customer Care Enhancement Project. As the blueprinting phase of the CIS project is completed, Terasen Gas will be looking for other opportunities that may result from the redesign of business processes and the integration of SAP IS-U/CR&B Customer Information System and the Aspect Unified to bring additional benefits to customers.

4.5.2.2 Control over Key Technologies

As a result of this Project, Terasen Gas will control the key technologies in place to support the meter to cash business processes. The Company will be able to control the cost and timing of system and process changes primarily through the use of internal resources. We will be able to prioritize changes to provide the greatest value to the Company and its customers. The Company will also be able to react more quickly to the concerns and suggestions of customers to make improvements to support changing customer expectations.

Over time, as Terasen Gas gains experience with both the system and business processes, the Company will also be able to proactively identify new opportunities and cost efficiencies that will be prioritized and implemented to garner the maximum benefit.

4.5.2.3 Service Quality Improvement Strategy

The principle driver for the Customer Care Enhancement Project is customer service quality. The Project will enable Terasen Gas to exercise control over the processes and technologies that facilitate the Company's adaptation to changes in the business environment and changing customer expectations to ensure service quality is maintained and enhanced.



Service metrics within the current arrangement were negotiated in 2001 and were assumed at that time to remain relatively static based on historical experience The design of the current outsourcing agreement as well as the outsourcer's operating model are based on this assumption. Due to the cost implications of either improving the performance targets or increasing the number of metrics, the contracted metrics have remained largely unchanged. One new metric that was introduced in 2007 was a specific metric to capture customer satisfaction related to the call centre experience. This was introduced to support a more balanced approach to service quality in the call centre between internal quality criteria and the overall customer experience.

We now know that service quality is a moving target that needs to revisited and refreshed to reflect changing business needs and customer expectations. Service quality also needs to consider the implications of significant technology change which supports and drives changes to business process and customer expectations.

Looking forward Terasen is proposing a change to the service metrics, the measurement methodology, and the process to validate that the metrics are reflective of customer value over time. The metrics also need to have a broader reach than has been considered in the past to address a wider range of business processes impacting the customer experience, i.e. timely issuance of refund cheques for credit balances.

It is appropriate to maintain the current service levels as reflected in the Client Services Agreement through 2012. During project implementation and this period of stabilization, new service metrics will be developed and proposed.

Based on industry best practice as well as Terasen Gas' experience in managing the services through the outsourcing arrangement, Terasen Gas completed an analysis to compare what might be more appropriate targets to the metrics that are currently in place. The discussion below addresses the results of the analysis related to three key areas:

- Call centre
- Billing and back office operations
- System support

Call Centre

The following table illustrates current utility industry best practice service metrics that are in general use in today's utility call centres. These indicative metrics address the customer experience. Additional internal metrics will also be developed to address productively measures that will be material in addressing business process efficiency and cost effectiveness.

MEASURE	UTILITY BEST PRACTICE SERVICE METRICS	CURRENT SERVICE METRICS
First Call Resolution	80%	No current metric
Customer Satisfaction	> average energy call centre	Within 5% of the average energy call centre
Average speed to answer		

Table 4.4: Utility Industry Best Practice Service Metrics
TERASEN GAS INC. CUSTOMER CARE ENHANCEMENT PROJECT CPCN INSOURCING OF CUSTOMER CARE SERVICES AND IMPLEMENTATION OF A NEW CIS



Inquiries	80% /30 seconds	75% /30 seconds			
Collections	80% /30 seconds	65% /30 seconds			
Emergencies	95% /30 seconds	95% /20 seconds			
Abandonment rate					
 Inquiries and collections 	< 4%	< 40%			
Emergencies	<1%	No current metric			
Blocked calls	<.02%	No current metric			
Email response	Integrated into the inbound queue	98 % / 2 business days			
Chat response	90% /20 seconds	No current metric			
Internal Call Quality	85%	85%			

Definitions:

- Customer satisfaction percentage of customers surveyed who are overall very satisfied with the CSR who handled their call. This is compared to the average energy call centre through third party verification.
- First call resolution percentage of contacts resolved without a second or subsequent contact for the same reason within 72 hours of the original contact
- Average speed to answer percentage of calls handled within the specified time period (80 percent in 30 seconds)
- Abandonment rate percentage of calls where the caller hangs up before the call is answered
- Blocked calls percentage of calls that cannot be completed due to lack of infrastructure availability
- Email response percentage of e-mails responded to within the specified time period
- Chat response percentage of chats responded to within the specified time period
- Internal call quality measures the quality of the call in terms of adherence to specific scripting, correct completion of all required tasks, accuracy of the information provided to the customer and adherence to Company policy.

The utility best practice service metrics in the table above include a subset of current utility service levels metrics as described in the *"Utilities Industry Benchmark Report – Best in Class Call Centre Performance"* published in May of 2009 by Benchmark Portal and attached as Appendix N. In section 3 of this Appendix the author describes utilities industry average and the best of utilities industry average metrics.

Internal productivity measures and metrics will also be developed in 2012 once the new technologies and business processes are in place to ensure that call centre efficiencies are implemented. In particular the efficiencies related to customer self-serve and the implementation of integrated email and online chat functionality will be tracked as these changes will enable cost savings to the benefit of customers. The sensitivity analysis described in Section 4.3.2.2.1 illustrates the potential of these technology changes in the future. Terasen believes that these new communication channels will be attractive to customers and Terasen Gas will actively promote their use once the new operating model is stable.

Billing and Back Office Operations

Billing and back office operations are areas that do not have standard industry utility service metrics as the service expectations in these areas are largely dependant on the underlying technologies, in particular the CIS. Historically, and for the purposes of the current outsourcing arrangement, service metrics were established to represent at a high level a few key metrics



that were intended to be indicative of the quality of service we believed we provided to customers in the past. Prior to outsourcing in 2002 billing and back office operations had been relatively stable. Since that time, the introduction of Customer Choice, the implementation of new taxes and well as changes to existing taxes, and the volatility of gas prices have resulted in much more complexity in the billing area than at any time in our recent history. The decision to outsource also contributes to this complexity in that the Company's visibility into current business processes is limited by both geography and our direct access to the tools and technologies in place with our outsourcer.

The three key service quality indicators in use today related to billing and back office operations are:

- Billing accuracy monthly service level target of 99.9%
- Billing timeliness monthly service level target of 95%
- Billing completion monthly service level target of 95%

Today these are aggregated into a composite score and have been discussed at the semiannual Customer Advisory Council meetings and included in the annual Service Quality Report to the BCUC as part of the last PBR settlement.

Going forward Terasen Gas is proposing that the metrics related to billing and back office be expanded to more closely reflect the discrete business processes that impact service quality. Some of these metrics will be internal as their purpose is to monitor the efficiency of key business processes. Others will be more visible and measure direct impacts on the quality of service provided to customers. The types of metrics that are being considered include the following:

Accuracy	Percentage of statements mailed to customers with no errors
Completion	Percentage of meter readings that are billed within two working days of receipt
Reversals	Percentage of invoices reversed due to inaccurate estimates or readings
Adjustment processing	Percentage of adjustments processed prior to the customers next scheduled billing date

Table 4.5: Billing

Table 4.6 [.] Bac	k Office (Operations -	Meter	Reading
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Accuracy	 Percentage of readings processed net of identified / reported errors
Timeliness	 Percentage of meter readings captured within two working days of the scheduled meter reading date
Completion	 Percentage of scheduled meter readings received (excluding reading missed due to premise non-access)



Meter Access	• Percentage of reported access issues resolved prior to the next meter reading date
Service Order Initiation	• The percentage of equipment and premise issues identified by meter readers that are escalated prior to the next meter reading date

The focus of this section was to highlight possible metrics that are likely to impact customers directly. Terasen Gas does understand however that service quality related to the customer experience is often impacted by back office processes. Additional internal reporting metrics related to billing and back office operations will be established as part of the CIS implementation and will be used to track operational stability through the first year of operations. Going forward the primary purpose of these internal metrics will be to ensure business processes are managed efficiently and cost effectively and that the benefits of improved business processes are appropriately measured and passed on to customers where applicable.

Systems Support and Sustainment

The current outsourced arrangement has defined service expectations related to support of the underlying technologies. These again were indicative of past experience over a time period of relative stability in terms of technology and business process change.

Once the Project is in place and has stabilized, Terasen Gas intends to propose service levels that are representative of our internal support standards for similar critical business applications. The table below defines the severity levels that would be applied to problems related to the SAP IS-U/CR&B as well Aspect Unified IP call centre suite.

Severity Level	Description	Example	Target Resolution Times				
1	Complete system failure impacting all users at one or more major sites, or all users of a critical business system (e.g. SAP, Exchange).	Operating system outage, Database unavailable.	Support staff is expected to start working within 30 minutes of being reported.				
2	Partial system failures impacting all users, major system performance degradation impacting all users, or complete system failure impacting a large number of users.	All users unable to print, all users have poor response time, or one entire office without service.	Support staff is expected to begin work within 1 hour of being reported.				
3	Amendment causing a sporadic or isolated problem with a Server or a system failure impacting a single user workstation. Note that higher priorities may be assigned to shrink- wrap problems based on TELUS's assessment of the problem.	 Priority 1 – user in unable to carry out primary work function or critical work activity is impacted Priority 2 – user is unable to carry out a major work 	 Priority 1 target resolution is 2 business hours Priority 2 target resolution is 1 business day Priority 3 target resolution is 2 business days 				

Table 4.7: Severity Levels



		 function Priority 3 – problem affects user but does not impair ability to do primary work function. 	
4, 5	Used internally to track non- customer affecting problems.	N/A	N/A

The SAP IS-U/CR&B as well Aspect Unified IP call centre suite will be considered mission critical as they directly impact customer service quality. Support for these systems as well as the hardware required to run them will be supported 7X24 including holidays. The availability target will be 99.7% meaning fully available 99.7% of the time excluding planned outages.

A comprehensive service quality improvement strategy is being developed as part of the Project. It will be reviewed annually to ensure it continues to capture the key metrics necessary to understanding the quality of service being provided to customers. The review process will be the trigger for analyzing the value of these metrics to the customer and initiating changes to the metrics to reflect changes in customer expectations.

3.7.7.4 Societal Benefits

In addition to customer benefits resulting from system functional improvements, control over key technologies and improvements in service quality monitoring, this Project will bring broader benefits to British Columbia as a whole through the creation of new jobs and their subsequent economic benefit. An economic impact assessment was conducted for Terasen Gas by KPMG to determine the societal benefits to be incurred within British Columbia as a result of insourcing call centre and billing operations. The detailed results of the assessment are attached in Appendix W.

The assessment measured the direct, indirect and induced economic impacts of the implementation of call centre and billing operations within British Columbia. These are defined as follows:

- 1. Direct impacts the employment and value-added economic impacts associated with the operations
- 2. Indirect impacts the employment and value-added associated with suppliers supporting the operations
- 3. Induced impacts those employment and value-added impacts associated with the respending of direct and indirect labour income generated i.e., impacts associated with the goods and services purchased by employees and suppliers' employees using their wages and salaries earned

From the perspective of the implementation of the Project, over 650 new jobs will be created by the Project. Provincial GDP is expected to increase by approximately \$40 million and tax revenue at all levels increase by over \$7 million.



Considering the societal impact of the annual operating costs that are expected to be incurred to support the new customer care function, KPMG concluded that approximately 400 new jobs would be created by 2012, including direct TGI employment and the balance represent direct supplier, indirect and induced employment. Provincial GDP in 2012 is expected to increase by over \$25 million annually and tax revenue at all levels increase by approximately \$4.5 million annually. These increases in GDP and tax revenue related to the annual operating costs will carry forward to the broader benefit of the B.C. population.

4.5.2.4 Conclusions

The Project is the best solution to meet our changing business needs and the needs of our customers. SAP's IS-U/CR&B customer system is highly configurable and will provide opportunities to customers through better access to information, improved billing and payment capabilities and online and IVR self serve options. Direct control over key technologies will also support more timely and cost effective changes to be made to address the changing needs of the Company and its customers. The Project will be accompanied by a new service quality strategy based on best practices in the utilities industry, which will directly benefit customers. The societal benefits that are expected to be generated in the province as a result of this Project are material. Terasen Gas is committed to the customers of British Columbia and is looking forward to being able to provide direct benefits to the communities and people it serves.



5. Stakeholder Consultation

TGI consulted with stakeholders both before and after the filing of the Application. The Amended Application addresses stakeholder input.

5.1 Pre-Filing Consultation

The Company met with a number of stakeholders to advise them of the Project in advance of filing this Application. In addition, the Company reviewed the Project at the Terasen Gas Customer Advisory Council meeting on May 27, 2009. Stakeholders in attendance were:

 Table 5.1: Customer Advisory Council Meeting Attendance

Access Gas	Direct Energy
Active Renewable	Elk Valley Coal
Alta Gas	EMPR
BC Apartment Owners & Managers	Energy Savings
BC Greenhouse Growers' Association	Fraser Health
BC Hydro PowerSmart	Lehigh Northwest Cement
BC Parks Board	Miles Industries
BC Public Interest Advocacy Centre	Montecito Towers
BCIT	Owen Bird Law Corp
BCUC	Powerex
BP Canada	Retirement Concepts
Cadillac Fairview	RT O'Callaghan & Associates
Canadian Utility Construction	Target Products
Capilano University	University SFU Community Trust
City of Vancouver	Vancouver Parks Board
Commercial Energy Consumers	Westport Innovations
Crosby Property Management	Willis Energy

TGI did not conduct any specific consultation with First Nations for this Project. The Project has no potential to adversely impact aboriginal rights and title so as to trigger a duty to consult. The only potential physical impact associated with the Project would be in the potential construction of facilities, if required. The expectation is that this would occur in previously developed areas on previously disturbed, privately held land.

5.2 Intervener Consultation – Post Procedural Conference

At the Procedural Conference held on June 23, 2009, the Company committed to meet with intervener groups that had expressed an interest in further consultation at the Workshop. TGI met with Commercial Energy Consumers of British Columbia (CEC) and BCOAPO et al., separately on July 8, 2009, and COPE on July 23, 2009, to discuss the application and any specific questions or concerns relating to the content of the Application as filed on June 2, 2009.

COPE did not raise any specific questions or concerns relating to the Application as filed on June 2, 2009.

Both CEC and BCOAPO indicated that they were open minded as to whether Terasen operated an insourced, comprehensive Business Process outsourcing, or Strategic Sourcing model for its Customer Care Function and CIS system; however, both parties suggested that the selected model should represent the best value for customers. In addition, they expressed a desire for further information in four areas to facilitate their assessment of the Project and any available alternatives:

- Project Benefits: CEC and BCOAPO expressed a desire for further details with respect to the benefits customers would enjoy following the implementation of the Project. TGI has included in this Amended Application a more detailed discussion of Project benefits. See section 4.5 (Future Model).
- Alternatives Analysis: CEC and BCOAPO indicated that it would be of assistance for TGI to provide a qualitative analysis of options to narrow down the alternatives. Quantitative analysis would be required only for 'short-listed' alternatives where appropriate. TGI has provided additional details regarding alternatives analysis, organized conceptually in the manner sought by Commission staff at the Procedural Conference. See section 4 (Alternatives Analysis)
- CIS Software Depreciation Term: CEC requested that Terasen review the eight year depreciation term for the CIS system, and determine whether the term is appropriate. Terasen Gas commissioned a depreciation review of CIS platforms and the Company's planned new CIS to determine if a change in the standard eight year depreciation for software is merited. Terasen Gas has used the standard eight year period in its cost of service calculation; however based on the commissioned review, a ten year period is an option for the Commission to consider using as a tool for smoothing the impact on customers' rates that is caused by the implementation of the Project. Further discussion regarding this review is available in section 6 (Financials).
- CIS Software Cost Escalation from Delay After December 15, 2009: BCOAPO reiterated their position, originally outlined at the Procedural Conference, that customers should not be affected should a delay in a decision from the Commission result in increased costs to the Project as a result of Terasen not signing a contract with SAP for the CIS software prior to December, 15, 2009. Terasen Gas does not agree with that position. The nature of software companies is that they are very sensitive to fiscal year targets and price products accordingly. Terasen Gas was aware of the possibility that no decision could be reached prior to the date proposed by SAP. SAP was well aware that no commitment could be made prior to regulatory approval and that Terasen Gas has no control over that timing but SAP could not commit to the same discounted amount in 2010 as it offered in 2009 as a matter of internal policy. Taking these two factors into account, Terasen Gas has provided for an appropriate amount of contingency funding to allow for this possibility.

In summary, Terasen Gas believes that the areas of particular interest identified by intervenors in the post-Procedural Conference consultation have been addressed in this filing.



6. Project Cost

The Company has now updated the project cost information as planned and has updated the preliminary figures included in the June 2, 2009 Application. Terasen Gas followed a detailed requirements evaluation process to determine the best customer care services sourcing solution and its implementation. The updated financial analysis results in a Project cost that is \$33 million lower than the cost filed on June 2, 2009. The results of the financial analysis demonstrate that the Project can be implemented cost effectively.

This section is organized as follows:

- Section 6.1 addresses the approach taken in presenting the updated financial information in this Amended Application;
- Section 6.2 discusses the Project cost, including an explanation for how and why the updated Project cost differs from the June filings;
- Section 6.3 addresses ongoing O&M costs, including an explanation for how and why the updated Project cost differs from the June filings;
- Section 6.4 presents the cost of service and rate impact analysis;
- Section 6.5 discusses the financial schedules;
- Section 6.6 discusses mechanisms for moderating rate impact;
- Section 6.7 discusses societal benefits associated with the Project;
- Section 6.8 addresses the impacts of IFRS; and
- Section 6.9 addresses the Harmonized Sales Tax.

6.1 Updated Information from the June 2, 2009 Application

In the June 2, 2009 Application, Terasen Gas provided initial financial information in support of its filing. The Company then supplemented this financial information in the Financial Supplement filed on June 15, 2009. At the time, the Company indicated that it would file an Evidentiary Update by late August 2009 that would include an updated cost estimate to implement the insourcing of customer care services. The updated information is included in this Amended Application, and this subsection discusses how the information is presented.

The cost breakdown provided in the June filings was based on how Terasen Gas views the Project, which is centred on the implementation to two key components. These components are the acquisition and implementation of a new Company-owned and operated CIS platform and the implementation of an in-house services delivery organization that includes the establishment of two new call centres and a billing and back office operations organization.

At the June 22, 2009 Procedural Conference, Commission staff outlined its view that the Project is comprised of four components. These four components were described earlier in section 2 as:



- CIS Software;
- CIS Implementation and Maintenance;
- Call Centre Implementation; and
- Billing and Back Office Operations Implementation.

As indicated in section 2, the Company is of the view that while this further breakout of the Project costs may be helpful in understanding how the costs were derived, these components are deeply intertwined and dependent on each other. In order to reconfigure the Customer Care function as planned by the Company, a key investment in enabling infrastructure in the form of a new CIS platform is needed. An investment in call centre technologies is also needed to provide customer care services which in turn relies on the new CIS for accessing and storing key information. Appropriate facilities are also required to house the employees delivering these services. None of these elements would be implemented on its own. The breakout of the Project into the additional components requested by Commission staff has been incorporated into this review of the Project costs. The acquisition and implementation of a new CIS platform is divided into CIS Software and CIS Implementation and Maintenance components, and the implementation of an in-house services delivery organization is divided into Call Centre Implementation and Billing and Back Office Operations Implementation.

The cost inputs in this financial analysis were developed according to the processes described in previous sections. To recap, this review included:

- Formal RFQ processes to support the selection of the CIS Software, CIS implementation services and call centre technologies software and implementation. The CIS alternatives discussions are described in Sections 4.1 and 4.2 and the call centre technologies selection process is included in Section 4.3.
- Third party expertise was engaged to validate Terasen Gas' strategic sourcing strategy and to discuss the evolution of Business Process Outsourcing in the utilities industry. This analysis also provided insight into what other utilities are doing as their BPO arrangements are coming up for review. A detailed discussion of outsourcing trends and Terasen Gas' strategic sourcing strategy is available in Section 3.
- Terasen Gas also engaged third party expertise to support the development of in-house call centre operations. This included determining call centre staffing levels to support forecasted call volumes, researching optimal call centre locations, reporting on electronic communications channels and trends in the industry including performing sensitivity analysis on the impact of changes in customer preferences in the call centre on staffing levels. The discussion related to call centre functions is provided in Section 4.3.
- Facilities expertise was also used to identify potential properties and buildings to support facilities requirements to support those business functions being brought back in house. This process is also described in Section 4.3.

The completion of these processes allows Terasen Gas to be confident that the cost of reconfiguring customer care services is now known with as much certainty as it is for the CIS implementation. We intend to review this updated financial information with intervenors and Commission staff as part of the Evidentiary Update Workshop scheduled for September 9, 2009.



We will file separately on a confidential basis an updated, detailed, cost build-up and working financial model, including working excel spreadsheets, which provides support for the updated Project cost requirements included in this Amended Application. As indicated in the Financial Addendum filed on June 15, 2009, maintaining confidentiality over this working model and cost build-up is in the best interests of customers as it will ensure that negotiations with contractors and other third parties can proceed in the most favourable manner possible. We believe that the updated Project implementation costs are presented in a manner consistent with the presentation identified by Commission staff at the Procedural Conference.

6.2 Summary of Project Implementation Costs

The total Project implementation costs are estimated to be \$122.1 million including AFUDC. There is a capital and O&M component to the Project that is included in this total as follows:

- the total capital cost excluding AFUDC is estimated to be \$108.5 million;
- total AFUDC is estimated to be \$3.5 million; and
- the total deferred O&M cost that is estimated to be incurred prior to the go-live of the Project on January 1, 2012 is expected to be \$10.1 million.

The following table provides a breakout of the updated implementation costs by the four components requested by the Commission, as well as the year in which the expenditures are expected to occur.

Coo	Cost Component		Project Implementation							
Cos	Component	Total	2009	2010	2011	2012				
1.	Capital									
2.	CIS Software	6,080	430	4,740	910	-				
3.	CIS Implementation & Maintenance	58,190	590	21,150	30,340	6,110				
4.	Call Centre	33,230	560	3,380	27,230	2,060				
5.	Billing & Back Office Operations	10,980	260	130	8,560	2,030				
6.	Subtotal Capital	108,490	1,840	29,400	67,040	10,200				
7.	AFUDC	3,540	-	900	2,640	-				
8.	Total Capital	112,020	1,840	30,300	69,680	10,200				
9.	O&M (Deferred)	-	-	-	-	-				
10.	CIS Software	-	-	-	-	-				
11.	CIS Implementation & Maintenance	-	-	-	-	-				

Table 6.1: Project Implementation Costs



12.	Call Centre	7,150	-	50	7,100	-
13.	Billing & Back Office Operations	2,930	-	20	2,910	-
14.	Total O&M (Deferred)	10,080	-	70	10,010	-
15.	Total Project Costs	122,100	1,840	30,370	79,690	10,200

The capital costs for the Project relate to the implementation of the new CIS platform and the implementation of the new in-house service delivery organization. The deferred O&M costs relate to the labour costs of the new customer service representatives, billing and back office operations personnel, and the new operating costs of the two new call centres that need to be ready for use starting July 2010 to train the new employees. Given that service delivery will not start until January 1, 2012, the cost of these resources needs to be deferred for this period of time. The deferral accounts proposed in this Application results in there being no revenue requirement impact in 2010 or 2011.

A further breakout of the cost inputs for each of the Project components is provided in Schedule K that follows in this filing.

The implementation costs set out above are those required to successfully complete the Project.

6.2.1 Summary of Changes in Project Implementation Cost Compared with the June 2, 2009 Application

The primary purpose of the planned Evidentiary Update that has now been incorporated within this Amended Application is to provide final P90²⁹ Project implementation costs. At the time of the June filings, while the cost of the CIS software and the implementation costs for that software were known with relative certainty, this was not the case for the costs to implement the customer care services reconfiguration. Terasen Gas has since finalized these costs and has also reviewed the CIS implementation costs to capture any refinements that were necessary. Terasen Gas is confident that it can successfully complete the implementation of the Project within the budget set out above.

The total capital costs to implement the Project is expected to be \$33 million lower than the level set out in the June 2, 2009 Application. This reduction is comprised of:

- the removal of costs associated with the construction of the two new call centres, which proved to be unnecessary;
- a reduction in the amount of contingency assumed for the Project now that implementation costs are understood; and
- a reduction in labour costs associated with the negotiation of an agreement with COPE for the staffing of the new call centres and for billing operations.

²⁹ The estimate of costs at which there is a 90% probability of falling within (not exceeding) the estimate.



6.3 Ongoing O&M Costs

All resources and staff required to provide customer care services internally by Terasen Gas, including technical, facilities, and Human Resources support will be acquired as the Project is implemented, primarily in 2010 and 2011. During this period business processes will be established internally so that customer care services can be delivered starting with the CIS go-live that is scheduled for January 1, 2012. Operating costs will start to be incurred at that time. The deferral mechanisms result in there being no revenue requirement impact for 2010 and 2011.

6.3.1 Updated Ongoing O&M Costs

For 2012 the estimated total O&M costs that the new Customer Care function is expected to incur is \$46 million, combined for all three of the Terasen Utilities. This amount represents a cost of \$48 per customer, again combined for all of the Terasen Gas companies. These costs are expected to increase primarily at the rate of inflation after 2012.

Cos	t Component	\$000s
COS	Component	Total
1.	Customer Advocacy	250
2.	Call Centre	12,350
3.	Billing Operations	5,910
4.	Outsourced Services	20,310
5.	IT Support	2,660
6.	HR Support	700
7.	Facilities Support	3,330
8.	Management and Administration	750
9.	Total	46,260

 Table 6.2: Projected Ongoing Annual O&M Costs for 2012

For the purpose of providing a summary of future costs to support the new customer care function, the Facilities Support component provided in the table above includes the cost of the expected lease of the Lower Mainland Contact Centre. This lease will not, however, be treated an operating expense, but rather as a capital lease when the cost of the lease is incurred. Terasen Gas believes that once this lease is negotiated it may be treated as a capital lease. This treatment was also selected because it results in a more conservative impact on the cost of service than if it was assumed to be an operating lease.

Terasen Gas believes that the level of ongoing O&M costs set out above are those required to successfully support the ongoing operating and maintenance requirements of the new customer care function.



6.3.2 Summary of Changes in O&M Compared with the June 2, 2009 Application

The total annual O&M costs in 2012 to support the new Customer Care function is expected to be a net \$0.8 million lower than the level set out in the June 2, 2009 Application. This reduction is primarily the result of labour savings associated with the negotiation of an agreement with COPE for the staffing of the new call centres and for billing and back office operations.

6.4 Cost of Service and Rate Impact Analysis

The implementation cost, combined with the anticipated operating cost of the new customer care function in 2012, is expected to result in an annual cost of service of \$64.00³⁰ per customer. This cost compares with a notional \$65.50³¹ per customer for the annual cost of service of the existing customer care function in 2012, assuming that no new incremental costs would be incurred to support the function in its current form. The difference in these amounts represents a reduction of \$1.50 per customer. In 2013, when the full capital cost of the Project begins to depreciate, the cost per customer increases to \$76.20³². After 2013 the annual cost per customer decreases each year. By 2019 the annual cost per customer will be below that of the notional cost of the current customer care arrangement. Given that the difference in the amount of assumed capital and future O&M, the Company is of the view that the cost of the two arrangements is essentially comparable.

On a levelized basis over the 20 year analysis period starting in 2012, the annual cost per customer of the new customer care function is estimated to be \$67.50.³³ This amount compares with the notional \$71.70³⁴ per customer for the levelized cost of the current customer care function for which we have assumed that no new incremental costs would be incurred.

From a rate impact perspective, the average burner tip change for a typical residential customer on the mainland of British Columbia for the first eight years after the full implementation of the Project is complete would result in an increase of approximately 0.50%, or approximately \$5 annually. After the initial eight years, the average annual burner tip change would be a decrease of approximately 2.5%, or approximately (\$27) annually.

The increase in the cost to the customer over the first eight years after the Project is implemented is caused primarily by the depreciation of the new CIS platform and service delivery infrastructure. This infrastructure is the critical enabler that allows Terasen Gas to provide future customer care service on a sustainable and more cost efficient basis than would be possible if the current outsourcing arrangement was continued after 2011.

³⁰ See Schedule 7 – Cost per Customer, line 10, where this amount is expressed unrounded as \$64.02.

³¹ See Schedule 7 – Cost per Customer, line 71, where this amount is expressed unrounded as \$65.53.

 $^{^{32}}$ See Schedule 7 – Cost per Customer, line 10, where this amount is expressed unrounded as \$76.22.

³³ See Schedule 7 – Cost per Customer, line 65, where this amount is expressed unrounded as \$67.52.

³⁴ See Schedule 7 – Cost per Customer, line 76, where this amount is expressed unrounded as \$71.72.



6.4.1 Cost Allocation by Utility

As indicated in the Financial Addendum from June 15, 2009, all costs to implement the Project will be incurred by TGI. For the purposes of determining the rate impact by utility, Project costs were allocated among TGI, TGVI and TGW based on the number of customers served by each utility. The Company believes that an allocation based on the number of customers served by each utility is reasonable because the service will be provided from a common delivery platform. After these costs were allocated, the cost of service was determined separately for each utility following standard rate making practice as described below.

6.4.2 Rate Impact and Financial Analysis Approach

The rate impact and financial analysis performed were completed at the entity level for Terasen Gas Inc. (TGI), Terasen Gas (Vancouver Island) Inc. (TGVI) and Terasen Gas (Whistler) Inc. (TGW). The total of the results for each of the Terasen Utilities is the total Project impact on the future cost of service that customers will pay for in rates. A brief discussion of the components included in this analysis follows below.

A. Rate Impact

An incremental rate base and revenue requirement analysis was conducted to determine the approximate cost of service and corresponding rate impact to the customers of Terasen Gas. This approach identifies the incremental costs and benefits of pursuing a capital investment or service and determines the overall change to the revenue requirement by determining impacts as they relate to the following³⁵:

1. rate base:

- a. gross plant in service;
 - i. Retirements have no impact on rate base as they are reflected in both the gross plant in service and accumulated depreciation. Retirements identified in the model occur when an asset has reached a net book value of zero (i.e. the asset is fully depreciated). Early asset retirements have not been forecast;
- b. accumulated depreciation;
- c. contributions in aid of construction;
- d. deferred charges;
- 2. earned return;
- 3. operating & maintenance expense;
- 4. depreciation & amortization expense;
- 5. property taxes;
- 6. timing differences (including CCA);
- 7. tax expense.

³⁵ The cost of service analysis for the CCE CPCN assumed existing approved return on equity and equity thickness for the 20 year analysis period, existing depreciation, CCA and capitalized overhead rates, forecast federal and provincial tax rates, forecast debt rates, forecast average customers until 2015 and forecast growth of 0.74% per year for TGI, 2.5% per year for TGVI and 1.3% per year for TGW thereafter.



The benefit of this approach is that it provides an estimate of the portion of the cost of service, and correspondingly the rate impact to customers, that is attributable to the investment or service that is being evaluated.

B. Financial Analysis

The results of the incremental cost of service analysis serve as an input to the discounted cash flow. The incremental capital spending is categorized as a cash out flow and is offset by the incremental revenue, operating and maintenance, property tax and tax expense cash flows that result from the change in the cost of service. The net cash flow is discounted at the nominal after tax weighted average cost of capital to determine the net present value of the cash flows as they relate to the Project. As noted earlier, the cost of service analysis for the Customer Care Enhancement Project assumes the existing approved return on equity and equity thickness for the 20 year analysis period, existing depreciation rates, CCA and capitalized overhead rates, forecast federal and provincial tax rates, forecast debt rates, forecast average customers until 2015 and forecast growth of 0.74% per year for TGI, 2.5% per year for TGVI and 1.3% per year for TGW thereafter.

6.5 Financial Schedules

The financial schedules included in this section were originally provided in the Financial Supplement filed on June 15, 2009 and have been updated as appropriate for the purposes of this filing. They are attached in Appendix K of this filing. We again provide a comparison of the existing customer care arrangement (notional costs) and the new customer care function for informational purposes, but continue to caution that the costs of the current customer care arrangement do not include an estimate of the costs to place it on a footing equal to that of the new CIS platform and strategic sourcing model. We do not believe that such a comparison is valid. In our view the current arrangement is not sustainable.

The following supporting financial schedules are appended to this filing in Appendix K and reflect the updated Project implementation and ongoing O&M costs that is the subject of this Application:

- 6.5.1 summary of the Project implementation costs, Schedule S1 in Appendix K;
- 6.5.2 summary of the future O&M costs Schedule S2 in Appendix K;
- 6.5.3 the depreciation summary and detailed continuity schedule, Schedule S3 in Appendix K;
- 6.5.4 the Capital Cost Allowance (CCA) summary and detailed continuity schedule, Schedule S4 in Appendix K;
- 6.5.5 the revenue requirement Schedule S5 in Appendix K;
- 6.5.6 the discounted cash flow analysis Schedule S6 in Appendix K; and
- 6.5.7 the cost of service per customer Schedule S7 in Appendix K.

Further information about each of the schedules is provided below.



6.5.1 Summary of the Project Implementation Costs (Schedule S1 in Appendix K).

This schedule provides a summary of the estimated cost to implement the Project. Total Project costs are broken out by capital and deferred O&M. Capital costs are those that will be incurred to implement such elements of the Project as the new CIS system, the building and equipping of the new call centres, as well as the recruiting of the new staff that will be needed to provide customer care services in-house after 2011. Deferred O&M costs include the labour costs of the new service employees that will be recruited and trained in 2011 and the cost to operate the new call centres in 2011 once they are ready for use. The staffing levels included in the financial model include the resources required to deliver call centre and back office billing functions as well as supporting staff related to technology sustainment, human resources and facilities.

The Project implementation costs were determined after the appropriate customer care model was selected. Terasen Gas completed a detailed review of alternatives for the key components to determine how to best structure and implement the new model. The outcome of the evaluation of individual components yields a cost for each component that forms an input into the overall Project cost. The final Project implementation costs form an input into the depreciation and CCA schedules that follow.

6.5.2 Summary of Future O&M Costs (Schedule S2 in Appendix K).

This schedule provides an updated summary of the future O&M costs that the new customer care function is expected to incur after the Project goes live on January 1, 2012. These costs include all of the labour for the employees expected to be required for the delivery of in-house services. These costs are based on forecast direct labour and fully loaded with benefits and escalated by 3% rate of inflation over the analysis period for M&E staff and by the terms of the new collective agreement for COPE staff that are planned for the Contact Centres and Billing and Back Office Operations. O&M costs also include the costs that will be incurred to support the in-house delivery of services, such as facilities, information technology, and human resources support to the two new call centres, billing organization and supporting technologies Other costs include those incurred where services remain including the CIS platform. outsourced to third parties, such as for meter reading, statement print, collections agency action, and translation services. All non-labour costs have been escalated by a 2% rate of inflation over the analysis period. These costs were derived from a "bottom up" analysis of current and projected call centre and billing centre activity levels to determine the required staffing complement, appropriate technology tools and requisite space to house the activities.

Terasen Gas was assisted by third party consultants in determining the number of employees and operating footprint required for the call centers and billing centres. Internal expertise was used to assess costs for some outsourced components as well as to determine costs required to support ongoing activities with internal resources. Terasen Gas retained a consultant with extensive background and expertise in assisting companies in evaluating needs and costs in the call centre arena. Third party expertise was also used to assess the cost of housing these activities.



Future O&M costs include the need for an interim manual meter reading solution starting in 2012 that is required as a result of BC Hydro's Smart Metering implementation planned for 2012. Currently, Terasen Gas and BC Hydro use a joint manual meter reading process. BC Hydro is expected to exit from this process as it implements its Smart Metering program which requires Terasen Gas to develop an alternate solution. An interim manual meter reading solution is expected to be required for a period of time until Terasen Gas is able to determine how to proceed with a sustainable long-term solution. Terasen Gas expects to file a separate CPCN Application addressing this requirement at some time in 2010. For the purposes of Customer Care Enhancement Application, we have included the estimated cost to establish an in-house manual meter reading capability. This cost is included in both the estimated cost of the existing customer care arrangement and the future O&M cost of new in-house customer care function.

The O&M costs form an input into the revenue requirement and discounted cash flow schedules that follow.

6.5.3 The Depreciation Summary and Detailed Continuity Schedule (Schedule S3 in Appendix K).

This schedule calculates the accounting provision for the consumption of the investment in the Customer Care tangible and intangible assets (Rate Base). This schedule takes as inputs the Project implementation costs to complete this calculation. The provision calculated by this schedule is used as an input into the revenue requirement.

In the June 16, 2009 Workshop a question was raised about the meaning of "retirement" that is used in the rate base and depreciation continuity schedules. Retirements as they are referred to in these schedules reflect the removal of the asset value as it becomes fully depreciated. This means that the financial model assumes that the asset is retired when it is fully depreciated.

6.5.4 The Capital Cost Allowance (CCA) Summary and Detailed Continuity Schedule (Schedule S4 in Appendix K).

This schedule calculates the prescribed deduction allowed by the Income Tax Act for determining taxable income which affects the incremental income tax the Company would have to pay. This schedule also takes as inputs the Project implementation costs to complete this calculation. The deduction calculated by this schedule is used as an input into the revenue requirement.

6.5.5 The Revenue Requirement (Schedule S5 in Appendix K).

This schedule summarizes the incremental revenue requirement that is caused by the implementation of Project; the schedule calculates the incremental payment that customers must make to cover the costs of the Project net of benefits. This schedule takes as inputs the output from the depreciation and CCA schedules, as well as the future O&M costs of the new



customer care function. The actual incremental cost that customers will bear is set out on line 14 for TGI, line 27 for TGVI, and line 81 for TGW. The output of this schedule is also used as an input into the cost of service per customer to determine those amounts.

6.5.6 The Discounted Cash Flow Analysis (Schedule S6 in Appendix K).

This schedule calculates the present value of the future cash flows net of tax effect created by the implementation of the Project, discounted by the average weighted after tax cost of capital. Given that the discounted cash flow is positive for the Project, this supports the Project proposed by Terasen Gas.

6.5.7 The Cost of Service per Customer (Schedule S7 in Appendix K).

This schedule summarizes the annual cost of service, as well as showing the annual cost per customer. The cost of service is comprised of the operating and maintenance ("O&M") costs of the new customer care function plus the capital cost to implement the changes described in the Project. The annual cost of service is divided by the average annual number of customers to calculate the annual cost per customer.

As noted earlier the financial analysis was completed assuming no change to current approved accounting practices. The impact on rates arising from changes contemplated by IFRS are discussed in section 6.9 below.

6.6 Options for Moderating the Impact on Rates

Terasen Gas recognizes the value to customers in moderating the impact on rates that are caused by the relatively short depreciated life of such assets as software like the new CIS system. Two broad options are available for reducing what would otherwise be higher short to medium term rates that are the result of the Project implementation costs proposed by the Company:

- lengthening the depreciation period for the new CIS system so that it better reflects the useful life of this asset, or
- the recovery of the Project's costs are deferred and recouped over a longer period of time than permitted by the usual depreciation rules.

6.6.1 Increasing the Depreciation Period for the new CIS

Terasen Gas commissioned Gannett Fleming to complete a depreciation review of CIS platforms and the Company's planned new CIS to determine if a change in the standard eight year depreciation for software is merited. An increase in the depreciation may be merited given that the service life of this type of software is significantly longer than most other types of software. In its review, Gannett Fleming recommended considering increasing the depreciation for the new CIS platform by two years to ten.



Although Terasen Gas has not assumed a ten year depreciation period for the new CIS platform in its cost of service calculation, this change is an option for the Commission to consider using as a tool for smoothing the impact on customers' rates that is caused by the implementation of the Project. If this change in depreciation is viewed as beneficial by the Commission, the average annual change at the burner tip for a typical residential customer on the BC Mainland would decrease from 0.23% to approximately 0.03% over the ten year period starting in 2012.

6.6.2 Use of a Deferral Mechanism for Moderating the Impact on Rates

An alternate method for moderating the impact on customers' rates is the use of a deferral mechanism. Recovering costs over a 15 year period using deferral treatment for example, would result in a decrease in the average annual change at the burner tip for a typical residential customer on the BC Mainland from approximately (0.6%) to (0.5%) over the 15 year period starting in 2012.

6.7 Project Impact on the Benefits Expected from the Banner CIS Conversion

The issue of the impact of this Project on the Banner CIS Conversion has been raised by stakeholders. TGVI is of the view that the benefits of the Banner CIS Conversion have been substantially realized, and the Project will provide additional benefits to customers of TGVI and TGW.

The following table sets out the original Customer Care Conversion Project benefits as filed by TGVI in its June 2005 CPCN Application. It shows that the peak cumulative deficit will reach \$335,000 in 2013 before turning positive in 2014. In Order C-15-05 the Commission approved the Customer Care Conversion Project subject to TGVI accepting any deficit from the project should there be a subsequent conversion to a new CIS before realizing the benefits. TGVI requested in its project Application the right to set aside its offer to backstop the risk of a deficit if it can demonstrate that a subsequent conversion preserves or exceeds the benefits anticipated in 2005 Application. The Commission, in its subsequent approval order C-15-05, accepted this request.

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				<u>PR</u>	OJE	ECT SAV	'INC	SS/(COS	T) A	AS FILED) JL	JNE 2005	5						
	2006	2007		2008 2009		2009	2010		2011			2012		2013		2014		2015	
Revenue Requirements																			
Retain Banner	\$ 5,115	\$	5,356	\$ 5,648	\$	5,865	\$	5,981	\$	6,231	\$	6,473	\$	6,687	\$	6,943	\$	7,108	
Conversion to Energy	\$ 3,281	\$	6,078	\$ 6,175	\$	6,274	\$	6,396	\$	6,520	\$	6,636	\$	6,750	\$	5,703	\$	5,899	
Savings (Cost) to Convert	\$ 1,834	\$	(722)	\$ (527)	\$	(409)	\$	(414)	\$	(289)	\$	(163)	\$	(63)	\$	1,240	\$	1,210	
PV each year	1,728		1,087	645		323		15		(188)		(296)		(335)		393		1,062	

Table 6.3: TGVI Customer Care Conversion Project Financial Benefits

Terasen Gas is of the view that the Customer Care Enhancement Project preserves the benefits anticipated in TGVI's 2005 Customer Care Conversion Project and that as a result the deficit risk provision is not triggered by the implementation of the Customer Care Enhancement



Project. In its June 2005 CPCN Application, TGVI set out a number of benefits that the Customer Care Conversion Project would realize and that were realized shortly after the completion of the project in December 2005.

The key benefit enabled by the conversion was that a common customer care platform and service delivery model provided TGVI with the same scope and level of services enjoyed by TGI's customers. Specific services that customers of TGVI received immediately on project completion included extended call centre hours of operation, access to a user-pay credit card option as an alternate payment method, access to translations services for non-English speaking customers, access to electronic bill presentment and payment processing services, and more comprehensive Interactive Voice Response and web services. For customers of TGVI this means that service levels were enhanced and additional services were delivered that would otherwise not be available. These benefits will continue to be provided to customers of TGVI after the implementation of the Customer Care Enhancement Project is completed in 2012.

The Customer Care Enhancement Project not only preserves these benefits but can be implemented for a lower cost than it would otherwise be possible if the conversion project had not proceeded. Given that all of the customers of Terasen Gas are now served using a common customer care platform and service delivery model, the implementation of the Customer Care Enhancement Project is less complex because fewer processes need to change and no additional data conversion from the Banner CIS is required.

6.8 The Impact of IFRS on the Cost of Service

For the purposes of updating the financial analysis we assumed that current approved accounting practices remain unchanged. We have however reviewed the impact of the proposed changes resulting from International Financial Reporting Standards ("IFRS"). The changes contemplated by IFRS, as well as changes to the overhead capitalized rate and depreciation rate, would result in a levelized cost per customer of \$70.19. Compared with the levelized cost of \$67.50, these changes would increase the cost per customer by \$2.69.

6.9 The Impact of the Proposed Harmonized Sales Tax on the Cost of Service

The BC provincial government recently announced plans to replace the Provincial sales Tax ("PST") with the Harmonized Sales Tax ("HST") that will be combined with GST as a single consumption tax that will be applicable on the sale of all goods and services in the province starting July 1, 2010. HST payments will be treated as an input tax credit allowing businesses in the province to recoup these payments.

Terasen Gas is monitoring the proposed implementation of the HST for its impact on the Project.



6.10 Conclusion

The business case for the Project is based on a need to meet customer care requirements in the future, which Terasen Gas believes cannot be met by the existing outsourcing arrangement. The Project cost outlined in the Application, and supported by the information included in this Financial Supplement is reasonable and necessary to meet the needs of our customers and business.



7. Conclusions

As was the case for BC Gas in 2001, Terasen Gas has reached a decision point in respect of its customer care function and CIS platform. However, the Company is in a different position today than it was in 2001 in four key respects:

- a) The energy marketplace as well as customer expectations of service providers have changed. It is evident that much more change is coming in how consumers view energy, how they use it and in the forms of energy provided. Terasen Gas' customer care function must adapt to meet customer expectations regarding, for instance, new channels of communication with the Company, and the ability to obtain more detailed consumption information to assist in reducing energy consumption and GHG emissions.
- b) The outsourcing industry has evolved to provide new opportunities for different customer care models. Many utilities like Terasen Gas that were early adopters of comprehensive Business Process Outsourcing arrangements have recently moved towards a more flexible Strategic Sourcing model, akin to that proposed by Terasen Gas in this Application.
- c) The technology platforms available on the market have improved significantly. The independent benchmarking study of CIS technologies by Gartner identifies the proposed SAP system as one of two industry leaders (with Oracle), and relegates the Peace CIS platform to being a niche player in the market. The selection of SAP accords advantages over Oracle by virtue of ease of integration with Terasen Gas' existing extensive SAP infrastructure.
- d) Our corporate capacity to build projects, manage operations and integrate sophisticated systems has expanded significantly over the past seven years, as evidenced by the success of our operating model and financial results delivered to the benefit of our customers and shareholder.

The changes in TGI's operating environment and customer expectations have created new challenges for the existing arrangement with CustomerWorks LP and its legacy CIS. The evolution of the outsourcing market and the advances in CIS packaged solutions have given rise to new opportunities to consider different customer care models. TGI has given extensive consideration to the alternatives available for delivering the required functionality in a cost effective manner. This Project is critical to the future of our business. We are well positioned to implement it. Terasen Gas believes that this Project is necessary and in the public interest and that a CPCN should be granted as sought. A Commission decision no later than January 31, 2010, is necessary to meet the implementation schedule and effective date of January 1, 2012, for this Project.

Appendix A GLOSSARY OF TERMS

PLEASE REFER TO

Customer Care Enhancement Project CPCN Application Filed on: June 2, 2009 Exhibit B-1 Appendix I DOUGLAS LOUTH ASSOCIATES LTD. – ASSESSMENT OF THE QUALIFICATIONS AND AVAILABILITY OF OUTSOURCED CUSTOMER CARE SERVICE PROVIDERS AND POTENTIAL CONVERSION OF TERASEN GAS VANCOUVER ISLAND REPORT

Terasen Gas Inc.

ASSESSMENT OF THE QUALIFICATIONS AND AVAILABILITY OF OUTSOURCED CUSTOMER CARE SERVICE PROVIDERS AND POTENTIAL CONVERSION OF TERASEN GAS VANCOUVER ISLAND

May 9, 2005

Douglas Louth Associates Inc. Vancouver, BC

ASSESSMENT OF THE QUALIFICATIONS AND AVAILABILITY OF OUTSOURCED CUSTOMER CARE SERVICE PROVIDERS AND POTENTIAL CONVERSION OF TERASEN GAS VANCOUVER ISLAND

TABLE OF CONTENTS

1.	Introduction	2
2.	Current Outsourcing Arrangements	3
3.	Summary of Work Completed	4
4.	Potential Suppliers	5
5.	The Questionnaire Used To Solicit Information	6
6.	Evaluation of Respondent Information	6
	 General Response Factors	6 8 9 9 9 10
7.	Assessment Of Factors Relating To Use Of A Common Outsourcing Solution For TGI and TGVI	12
8.	Conclusion	14
	APPENDICES	

A.	Professional Profile of Douglas Louth	15
B.	Professional Profile of Doug Jones	18
C.	Work Plan Followed by DLAI	22
D.	Table of Contents of DLAI Questionnaire	23

1. INTRODUCTION

In March 2005, Terasen Gas Inc. (TGI) engaged Douglas Louth Associates Inc. to assess the qualifications of potential outsourced customer care service providers. This work was carried out in the context of expiry of the initial term of the company's current outsourcing contract with CustomerWorks LP in December 2006.

Douglas Louth Associates (DLAI) was also required to advise TGI regarding the conversion of separate customer care arrangements currently being followed by Terasen Gas Vancouver Island and Terasen Gas Whistler. TGI wishes to consolidate all of its customer care outsourcing contracts under one supplier so that it can offer consistent services to all of its customers.

The formal objectives for DLAI's work were set by TGI as follows:

"To carry out an independent review of the outsourcing capability in the marketplace and specifically:

- To evaluate whether value to customers exists in transitioning customer care services currently performed by CustomerWorks LP to an alternate service provider
- To evaluate whether value to customers exists in converting the present Terasen Gas Vancouver Island and Whistler customer bases to the customer care environment currently in place to support Terasen Gas' Inc's customers".

DLAI understands that these terms of reference have already been presented to BCUC by Terasen Gas. Completion of the necessary work will allow DLAI to formulate and present to the regulators a formal opinion on the benefits and risks of outsourcing options currently available to Terasen Gas.

Throughout our assignment we reported to Ms. Edna Katrichak of TGI. The majority of our work was carried out by our president, Douglas Louth, because he has extensive experience in the customer care area of the utilities industry. In 2004, Mr. Louth personally carried out work of a similar nature for Enbridge Gas Distribution in Ontario and he has extensive experience through consulting assignments in the customer care area for a large number of other Canadian utilities. Mr. Louth's qualifications as an expert in this regard have already been authenticated by the BC Utilities Commission, the Alberta Utilities and Energy Board and the Ontario Energy Board.

In order to formalize Mr. Louth's credentials to complete the work for TGI and to present a qualified opinion on the outcome, his professional profile is attached to this report as Appendix A.

Mr. Louth was assisted on the project by an associate consultant of DLAI, Mr. Doug Jones. Mr. Jones has also been involved in prior customer care-related assignments carried out by

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our firm for Direct Energy and Enmax. Mr. Jones' professional profile is attached to this report as Appendix B.

Work on the assignment was performed in the period March through May, 2005. All documents reviewed by DLAI consultants were provided by TGI and potential service providers with the assurance that they were current as of that date. It is nonetheless necessary for DLAI to note that it made every reasonable effort to validate information provided to our consultants but, in the last analysis, DLAI is forced to rely on the completeness and accuracy of data supplied to it in reaching opinions stated in this report.

Subsequent sections of this document describe DLAI's understanding of the history of the organizational circumstances in which customer care is being outsourced by TGI; the work plan followed by our consultants, and the outcome of the assignment.

For reasons of brevity, we have used a series of acronyms throughout the report. These are shown in Figure 1.

i iguit i fittonyms						
"TGI" = Terasen Gas Inc.	"ABS" = Accenture Business Services"					
"TGVI" = Terasen Gas Vancouver Island	"CWLP"= Customer Works Limited Partnership					
"TGW" = Terasen Gas Whistler	".Alliance" = Alliance Data Systems, supplier of customer care services to TGVI					
"BCUC" = British Columbia Utilities						
Commission	"CIS" = Customer Information System					
"The Regulator" = BCUC	"CPC" = Cost per Customer					
"Respondent" = The potential suppliers providing information to DLAI	"DLAI" = Douglas Louth Associates Inc					

Figure 1 – Acronyms

2. CURRENT OUTSOURCING ARRANGEMENTS

TGI and TGVI currently have two separate outsourcing contracts with two separate suppliers to serve different geographic segments of their total customer base. These are:

 Support of the BC Mainland and Interior Customer Base through Arrangements with CWLP. In 2001 Terasen Gas (then BC Gas) formed a joint venture with Enbridge of Ontario to cooperate in the outsourcing of customer care processes. The two utilities formed a joint venture company, CWLP, to provide such services on an outsourced basis. In 2002, CWLP decided to sub-contract the responsibility for the services to an Accenture affiliate company, Accenture Business Services (ABS). While CWLP remains TGI's supplier of record, ABS actually provides the human and technology resources to support TGI's customer services. These services support approximately 800,000 customers and are based upon use of the "Peace" CIS

2. Support of the Vancouver Island and Whistler Customer Base (TGVI) through Arrangements with Alliance. In 1999, Terasen purchased Centra Gas BC, a company supplying natural gas to Vancouver Island and Whistler. Centra was previously a member of the Westcoast Energy group and used the "Banner" CIS system to support billing and payment processes through an internal outsourcing arrangement with Enlogix, a company formed by Westcoast Energy. Enlogix was purchased by Alliance Data Systems in 2002 and has provided the same limited outsourced customer care services to TGVI since that date.

Alliance provides system hosting and application management, billing and payment processing services to TGVI and has itself outsourced a portion of these functions to Kubra (for bill presentment) and Symcor (for payment processing). All other customer care functions remain in-house.

These two outsourcing contracts together relate to 100% of TGI's current customer base of approximately 900,000 customers. The services provided to customers through these two outsourcing contracts are summarized in Figure 2.

Service	TGI Supplier	TGVI Supplier
Meter Reading	CWLP	In-house
Billing and Payment Processing	CWLP	Alliance/Symcor/Kubra
Credit and Collections	CWLP	In-house
Call Centre	CWLP	In-House
Supporting Technology	CWLP/Peace CIS	Alliance/Banner CIS

Figure 2 – Service Providers

3. SUMMARY OF DLAI WORK COMPLETED

At the beginning of the project, DLAI and TGI jointly prepared a work plan to address the objectives of DLAI's work. As a result, DLAI undertook twenty work steps, as shown in Appendix C. The major phases of the work were as follows:

- Development of a list of potential suppliers of outsourced customer care services to meet TGI's needs post-2006.
- Development of a questionnaire to solicit information from these suppliers.
- Evaluation of information contained in questionnaires completed by potential suppliers.

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- Resolution of questions relating to the information submitted by the potential suppliers.
- Assessment of factors related to use of a common outsourcing solution by all of the TGI companies, and in particular TGVI.
- Preparation of a formal report to TGI and, at the company's discretion, to BCUC.

Succeeding sections of this report will be sequenced in such a way as to report on the results of the first five of these work steps.

We gratefully acknowledge the full cooperation we received both from TGI and potential suppliers in the completion of our work plan. We are confident that we developed a fact base that was sufficiently comprehensive to support the findings contained in this document.

4. POTENTIAL SUPPLIERS

Prior to initiation of the DLAI project, TGI was approached by a number of potential outsourcing vendors who felt they could offer at least comparable services to those being provided by CWLP. DLAI has itself just completed a "Request for Information" project for Enbridge Gas Distribution. The Enbridge project requested more detailed information from potential suppliers, but was otherwise directly comparable to the work it conducted for TGI. In addition, DLAI has prior experience in the selection of outsourced customer care service suppliers for other clients.

The potential vendors previously identified and pre-qualified by the two organizations were consolidated. The resulting list was supplemented by further internet research carried out by DLAI's consultants. As a result, the following six potential vendors were identified and invited to respond to Terasen's requirements.

- Alliance Data Services Systems
- Atco I-Tek
- Cap Gemini
- Convergys
- First Data Corporation
- IBM

Each of these suppliers had demonstrable experience in providing services similar in scope to those required by TGI. Each serves existing clients in the electricity and gas utilities industries. Each ostensibly offers a range of services comparable to that presently being received by TGI from CWLP.

Terasen Gas itself decided not to ask CWLP to submit a formal response to its future requirements because sufficient information was already available to measure its capability to continue to provide service. CWLP thus became the "benchmark" against which to measure the capabilities of other potential outsourced service suppliers.

5. THE QUESTIONNAIRE USED TO SOLICIT INFORMATION

The contents page of the questionnaire used by DLAI to solicit information from potential suppliers is shown as Appendix D to this report.

As can be seen, potential suppliers were asked to respond to questions relating to a number of factors that would influence any decision by TGI to later ask for a formal response for replacement of the existing outsourcing service supplier.

In particular, the questionnaire asked potential suppliers to:

- Provide information on the financial foundation and stability of their business,
- Describe the scope of services they currently offer,
- Describe and commit to the levels of service they can offer,
- Provide outline information on potential costs of service, and
- Describe the level of technology they can/will support.

Convergys declined to submit a response when they reviewed the questionnaire, being unwilling to commit themselves to provision of the full scope of the services demanded by TGI in a Canadian support environment.

Despite DLAI's follow-up, CapGemini's representatives declined to provide all of the information asked of them and the company was therefore eliminated from further consideration at this time.

The data submitted by the four remaining potential suppliers was analysed by DLAI under the headings shown above. The analysis is reported upon in the next section of this report.

6. EVALUATION OF RESPONDENT INFORMATION

DLAI carried out detailed evaluation of all of the data submitted by potential suppliers and measured this against the services we understand to be presently provided by CWLP. In particular, DLAI set out to determine whether or not other suppliers could provide a matching range of services at similar or better levels of service at a comparable price.

From this evaluation it emerged that TGI does indeed have viable alternative outsourcing service options when its current contract with CWLP expires. Subsequent paragraphs will first set out those service factors common to all potential suppliers and will then describe key features unique to individual respondents. The final paragraphs in this section will provide a potential cost analysis derived from the questionnaire responses.

6.1. General Response Factors

All four of the potential suppliers appear from their responses to be financially viable based on information provided to DLAI regarding its current fiscal performance.

Douglas Louth Associates Inc.

However, business process outsourcing is a volatile business and we caution TGI to be diligent in this regard if it decides in future to pursue formal arrangements with and of the respondents to the questionnaire.

Each of the potential suppliers has provided a list of reference accounts relating to its outsourcing services. DLAI was not required under its terms of reference to authenticate such references, but we consider the extent and visibility of the references adds a good level of credibility to each of the responses.

Each of the suppliers claims to be able to support customer care services to match those presently being provided by CWLP from the points of view of scope and service levels.

In particular, each of the respondents stated their willingness to use the Peace CIS to support TGI's customer base. This commitment should have a very positive impact not only on transfer of the CWLP data base but also on the ease of conversion of TGI and TGVI customers. DLAI is firmly of the opinion that conversion of the TGVI data base to a Peace environment would be a significantly easier undertaking than conversion of both data bases to a completely new environment.

Each of the respondents also claimed that their organization could meet or exceed TGI's present service levels in the four main areas of customer service, namely meter reading, billing and payments processing, credit and collections and call centre operations. The reader should be cautioned that such claims should be subject to stringent verification by TGI before any decision on a new outsourcing supplier is made. However, present TGI service levels, though high, do not seem to have been an issue for the respondents at this early submission stage.

Each of the respondents already provides outsourced call centre services to utilities and each respondent claims that it can service Terasen's requirements on an existing facility. Each of the respondents claims to be capable of delivering 99% availability of the technology and services needed by customers.

DLAI has provided commentary on what it perceives to be the other individual advantages and disadvantages of each of the four respondents in the summary below. Comments relating to the provision of e-billing and e-payment services have been made in order to give some indication of the state of development currently existing in each potential supplier's CIS and technology platform.

6.2. Alliance Data Systems

Alliance Data Systems is based in Dallas. It is one of North America's leading suppliers of outsourcing services and has grown significantly in recent years through acquisition of other companies providing such services. It already provides services of varying scope to 64 utility clients on the continent and serves approximately 16 million utility customers.

Alliance proposes to rely heavily on sub-contractors to provide service to TGI. Olameter has been nominated to provide meter reading services while Symcor is an Alliance partner for billing and payment services.

Alliance offers e-billing and e-payment capability to its customers.

Alliance proposes to use its own services for credit and collection support to TGI customers.

Alliance itself operates 15 call centres in North America, two of which are in Canada. Neither of the Canadian call centres serves utility clients, but Alliance states that it would prefer to serve TGI customers from a Canadian location. It further states in its response that it would propose to set up a new call centre facility in Canada for this purpose. Alliance's US call centres currently serve seven utility clients with a total customer base of 4.6 million customers.

Alliance offers extensive hosting technology, plus guaranteed backup and emergency recovery capability. Hosting services are currently provided to Canadian utilities including Union Gas in Ontario and Manitoba Gas.

6.3. Atco I-Tek

Based in Edmonton, Atco I-Tek serves the customer care needs of five utilities, primarily Atco Gas, Atco Electric and Direct Energy. It operates five call centres in Calgary and Edmonton. It is part of the Atco group of companies but has been a standalone outsourcing service vendor since 1999.

In terms of annual revenue, customers supported and size of staff complement, Atco I-Tek is the smallest of the respondents to the DLAI questionnaire. However, it is a proven, capable supplier in the context of the Western Canadian marketplace.

Atco-Itek stated that, if the Peace CIS were to be used by TGI at its host facility, TGI would be the only organization doing so. The respondent stated that it is nonetheless prepared to run the Peace CIS, but would like to examine with TGI the possibility of moving to Atco I-Tek's own CIS that is used by its other clients. In DLAI's opinion, a decision to do so would probably involve significantly higher expense and risk for TGI than a decision to continue to use Peace. The advantages to TGI of such a move were not articulated by Atco I-Tek in its submission.

Because of the organization of the Alberta energy market, Atco I-Tek does not presently read meters and proposes to sub-contract this service if it serves TGI. It did not identify a preferred sub-contractor in its response.

All other services to TGI would be provided using Atco I-Tek's own resources.

Atco I-Tek states that it has the capability to offer e-billing services, but the system has not been implemented by any of its existing customers.

None of Atco I-Tek's existing clients use Integrated Voice Response (IVR) technology at its call centres, though the respondent claims the service is available. DLAI believes TGI should consider the potential cost and risk of becoming the first user of IVR before proceeding further with Atco I-Tek.

The company states that it offers mainline technology to support its client base and will guarantee uptime, backup and emergency recovery.

6.4. First Data Corporation

First Data Corporation is a large outsourcing company specializing in handling large volumes of financial transactions. It is a relative newcomer to the Canadian marketplace and was not specific in the scope of its Canadian services when responding to DLAI's questionnaire. The firm is headquartered in Omaha, Nebraska. It has 16 call centres, but only one currently serves a utility, this being located in Texas.

First Data proposes to rely heavily on sub-contractors to provide service to TGI. It did not identify a meter reading sub-contractor in its response but has spoken to Terasen Utility Services in this regard. It could not confirm its ability to meet TGI's performance standards or meet its volume requirements for meter reading until it has completed a partnership arrangement.

First Data proposes to partner with Symcor for billing and payment services and GE Consumer Finance for credit and collection services. Both companies are major service organizations who appear to have the capability to meet TGI's service standards.

It is not clear from First Data's response whether it offers e-billing and e-payment facilities to its clients.

First Data proposes to provide initial call centre services by using one of its existing facilities. These facilities are open 24 hours each day, seven days per week and First Data has committed to meet TGI's service levels and transaction volumes.

The Peace CIS is the preferred platform for support of customer care services and First Data uses a more current version of this software than does CWLP. First Data would like to convert TGI to this version, but made no mention of the cost of such conversion or which organization would bear the cost of the work.

Like its competitors, the company states that it offers mainline technology to support its client base and will guarantee uptime, backup and emergency recovery.

6.5. IBM

IBM is a large and credible outsourcing provider with clients around the world. It has a number of utilities in its outsourcing services client base. However, IBM was not entirely clear in its response regarding the scope of services offered to these utilities.

IBM claims it has recently formed a business partnership with Vertex, one of the world's leaders in the provision of outsourced customer care services. Based in the United Kingdom, Vertex also has a long list of existing utility clients to whom it claims to offer the full range of customer care related services. Vertex participation is the cornerstone of the IBM capability to support TGI, based on the response to DLAI's questionnaire.

IBM proposes to sub-contract meter reading services to Terasen Utility Services. All other customer care services would be supported by Vertex. Under this arrangement, IBM would in effect be the "project manager" of any arrangements made with TGI.

Vertex offers e-billing and e-payment facilities to its clients.

Vertex currently operates 32 call centres in the United Kingdom, plus one in Canada (Toronto) and one in India. The Toronto call centre handles over one million customer calls each month, a large percentage of which emanate from customers of a major Canadian utility. Overall, Vertex call centres handle 2.2 million calls from utility customers around the world each month.

Through Vertex, IBM can offer call centre service to TGI's clients on the basis of 24 hours per day, seven days per week. It can meet TGI's service level and call volume targets.

IBM/Vertex's call centres already have experience in running the Peace CIS.

Like its competitors, IBM states that it offers a variety of mainline technologies to support its client base and will guarantee uptime, backup and emergency recovery.

6.6. Potential Costs

In order to further validate DLAI's findings regarding the capabilities of respondents, the questionnaire asked potential suppliers to provide pricing information related to existing clients. Each potential supplier was reluctant to do so, citing confidentiality concerns. However, DLAI was able to solicit the following information, expressed in overall annual cost per customer:

- Alliance Data cited a very wide range of costs, with a minimum cost of \$44 and a maximum of \$81.50.
- Atco I-Tek provided a cost of \$45.51 for one of its existing customers, but this cost does not include the cost of meter reading.
- First Data provided a general estimate of \$25, not including meter reading.
- IBM quoted comparable costs in the range of \$33 to \$35, presumably based on the use of Vertex's outsourcing services.

DLAI is skeptical about the value of these cost quotations, particularly that provided by First Data. Our reasons for this statement relate primarily to the fact that no monetary

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commitments were asked for or expected from potential suppliers at the point where the questionnaire was completed and evaluated. More specifically:

- The majority of the quoted costs are significantly below the benchmark values for Canadian utilities established by our firm in a separate assignment conducted in 2004. The benchmark value in 2003 costs is \$53.40.
- Quotes do presumably contain neither provision for the cost of capital required for conversion of neither existing systems and business processes, nor new technology to support TGI. It was in fact unreasonable to expect potential suppliers to include such costs.
- None contain confirmation of the scope or level of service provided for the cost quoted.
- In the case of Alliance, First Data and IBM/Vertex, the costs may relate to clients operating in entirely different business environments than those that exist in Canada.

Notwithstanding these shortcomings, DLAI feels that it can deduce with reasonable confidence that potential supplier's costs are likely to be competitive with those currently charged by CWLP. In any event, TGI must obviously establish firm costs before it can support any decision to change its outsourcing supplier.

In an effort to achieve clarity of understanding, Figure 3 sums up the sub-contracting arrangements and related costs proposed by each of the potential suppliers.

	Alliance	Atco I-Tek	First Data	IBM
Meter Reading	Olameter	Not specified	Terasen Utility or other	Terasen Utility
Billing and Payment Processing	Symcor	Self	Symcor	Vertex
Credit and Collections	Self	Self	GE Consumer Finance	Vertex
Call Centre	Self	Self	Self	Vertex
Supporting CIS	Peace	Peace or own system	Peace	Peace
Sample Costs per Customer	\$44 - \$81	\$45.21	\$25	\$33 - \$35

Figure 3 – Proposed Sub-contracting Arrangements

Based on detailed evaluation of responses to the DLAI questionnaire, it is our firm's opinion that two of the suppliers, IBM and Alliance, seem especially well qualified to provide alternative outsourced services to TGI and TGVI.

However, it is also necessary for DLAI to point out that actual services and costs need to be investigated by TGI in considerably more detail before it makes any decision to implement a
change of supplier. It is DLAI's opinion that TGI should determine whether there is value to its customers in pursuing competitive bids from potential suppliers prior to any decision to renew the CWLP contract in 2007.

If the company believes this to be the case, a normal selection process would involve preparation and issuance of a formal "Request for Proposal" in order that firm commitments regarding scope of service, service levels and costs could be obtained from potential suppliers. Through such a formal process, further commitments would be obtained in respect of capital costs of process transition, data base conversion and technology acquisition.

If such a formal process were to be initiated, we suggest that TGI should include Atco I-Tek and First Data in the selection process in order to further evaluate their qualifications at a more detailed level. Depending on the timing of the decision, it might also be valid to re-examine the then current qualifications of those potential suppliers eliminated from the process described in this document.

7. ASSESSMENT OF FACTORS RELATING TO USE OF A COMMON OUTSOURCING SOLUTION FOR TGI AND TGVI

DLAI's terms of reference required it to carry out an independent review of the outsourcing capability in the marketplace related to conversion of the present TGVI and TGW customer bases. TGVI proposes to transition these data bases and related processes to the customer care environment currently in place to support Terasen Gas' BC Mainland and Interior customers.

The reader should be clear that DLAI was not engaged by TGI to examine its options in this regard, nor to make any recommendations on the best approach to be followed. However, to ensure an understanding of the capability of potential outsourcing suppliers, it was necessary for DLAI to examine TGVI's proposals for conversion. Our firm reviewed documentation TGVI has prepared in this regard, in particular a business case to support a CPCN application for the immediate conversion of TGVI's systems and processes. These documents forecast a positive outcome in terms of value to both TGVI and its customers.

The bulk of the combined existing customer bases of TGI and TGVI can be supported in a Peace CIS environment. Assuming Peace continues to be the CIS of choice, DLAI has been told that conversion can offer TGVI customers significant benefits. Based on reading of related TGVI documents, these benefits include:

- Better service, for example longer and more comprehensive call centre support hours.
- Processes consistent with other BC customers, for instance improved payment capability.
- One-supplier support, because all services outside meter reading will be handled by CWLP instead of a collection of outsourced and internal support groups.

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• Potentially less expensive overall support costs, because the need for separate handling of all aspects of TGVI support would be unnecessary and charges would become part of overall CWLP contract costs.

DLAI agrees in principal with the overall contention stated in the CPCN application, namely that conversion of TGVI's customers to a common environment is desirable and likely of significant benefit to those same customers.

DLAI also understands that there are no financial penalties attached to early termination of the Alliance contract. The cost of conversion of TGVI's customer base to this environment is therefore likely to be virtually the same, irrespective of the timing of the work.

Given that costs of conversion are thought by TGVI to be reasonable, there remain the issues of service levels, potential disruption of customer service and overall risk to customers due to the conversion process.

Immediate conversion of TGVI customer support to the TGI system appears from TGVI's business case to offer material advantages. DLAI understands that customer acceptance of the present TGI service is high; the services are comprehensive and processes for customer service are well established. Addition of a further 85,000 customers should not affect service levels once the conversion process is complete.

DLAI has been told that CWLP can effect the conversion over the next six months. DLAI can see no rationale for delaying the timing of conversion and suggests that an immediate start to the work, as suggested in the CPCN application, does not in any way increase customer risk. However, if TGI decides to postpone the work until after the CWLP contract has expired, it has now been shown that potential suppliers of outsourced services exist to continue to fully support an enlarged data base without depletion of service levels. In either event, disruption from a customer perspective should be low.

The risk to customers should also be maintained at the lowest possible level. The TGVI database will be converted to a new environment that is proven and successful in operation for TGI. Conversions of this type are always relatively expensive, but the transfer of TGVI customers to TGI's system seems to offer the least risk of cost overrun or operational difficulty.

If TGVI decides to proceed with conversion, it is of course essential to ensure that outsourced services can be maintained irrespective of the outcome of any re-negotiations with CWLP. In DLAI's opinion, there are potential suppliers to support any conversion approach which TGI may choose. In the short term, CWLP has the capacity to support TGVI customers with the full range of services offered to TGI. In the longer term, it has now been established that all of the potential suppliers of services can continue to support TGVI in a similar environment.

The utility itself must decide which is the most attractive timing based on its own criteria but DLAI sees no disadvantages to customers in either an immediate or longer term transition.

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8. CONCLUSION

DLAI believes that presentation of this report completely fulfils the terms of reference given to us by Terasen Gas Inc. We believe we have compiled a complete base of information necessary to address all of the questions set out by the utility in engaging our firm for this work.

We will be very pleased to discuss any of our findings with the company at any time. We will also be pleased to make a presentation of the contents of this report too the BC Utilities Commission should this step be required.

In closing, we would like to thank Terasen Gas Inc. for entrusting us with this important assignment and reiterate our gratitude to those persons at TGI who assisted us with our work.

Douglas Louth President

DOUGLAS LOUTH ASSOCIATES INC. May 2005

Appendix A

PROFESSIONAL PROFILE OF DLAI AND ITS PRESIDENT, DOUGLAS LOUTH

DOUGLAS LOUTH ASSOCIATES INC.

Douglas Louth Associates Inc. (DLAI) was founded in 1997 as a privately held company. It is registered in British Columbia and has its head office in Vancouver. It has a second office in the Dominican Republic, from which it supports its assignments in developing countries.

DLAI also has informal "partnership" arrangements with similar companies in Delhi, Washington DC and Europe. We share marketing and sub-contractor data bases with these companies and bid jointly on a number of our assignments, particularly those involving overseas work.

In its short history, DLAI has developed a very impressive client list in the energy industry. It includes:

- . The Asian Development Bank
- . USAID
- . The European Development Bank
- . The World Bank
- . The BC Utilities Commission
- . The Ministry of Finance of the Government of Egypt
- . BC Hydro
- . The Egyptian Electricity Authority
- . Direct Energy [Alberta]
- . Terasen (was BC Gas)
- . Westcoast Energy (now Duke Energy)
- . The Gujarat Electricity Board (India)
- . Centra Gas BC
- . Enbridge Gas Distribution
- . The Abu Dhabi Water and Electricity Authority (United Arab Emirates)
- . Enmax Energy
- . Deloitte Touche Tohmatsu (as a sub-contractor)
- . Advanced Engineering International (as a sub-contractor)
- . The Government of Cuba
- . Pacific Northern Gas

The Firm is an accredited supplier of consulting services to the World Bank, USAID and the Asian Development Bank. This accreditation means that our skills, credentials and performance have been verified by these organizations and do not need to be re-stated in proposals we submit to them in future.

DLAI has a number of proven methodologies to support its energy practice. One of these is the maintenance of a data base of benchmark variables related to customer care for a number

of North American gas and electricity utilities. We use this existing benchmark as a support tool on a number of assignments we have carried out in the CIS and customer care areas.

OUR PRESIDENT

Douglas Louth has a very strong record of experience in the energy industry, particularly in relation to regulatory affairs and customer care services. He has been accepted by the Ontario Energy Board and the BC Utilities Commission as an expert witness in the context of outsourcing of customer care services.

Before forming his own company, Mr. Louth was a partner for 14 years in the consulting firm of Deloitte and Touche. He was a member of that firm's worldwide utilities consulting practice and headed the same practice in Western Canada. He was involved in projects for utilities across North America in this capacity.

Representative DLAI Consulting Engagements

BC Hydro engaged Mr. Louth to review the utility's plans to outsource its customer care and other major functions to Accenture. Mr. Louth examined all aspects of the proposed arrangements, benchmarked the company's proposed contract cost and service levels against those of other utilities, prepared a number of major recommendations for improvement of outsourcing arrangements and provided independent evidence for subsequent regulatory hearings.

Mr. Louth served as the team leader on a project for the Gujarat Electricity Authority in India, the object of which was to restructure the financial, technology and customer service functions. This project was specifically designed to allow the company to prepare itself for a deregulated environment, while at the same time significantly improving its level of financial control over expansion of its operations.

He worked as the project director of a major assignment to justify, select and install new business practices, systems and processes in twelve new entities that emerged from privatization of the Abu Dhabi Water and Electricity Authority (ADWEA) in the United Arab Emirates. This assignment included definition of operating principles and process needs for new organizations involved in generation, transmission and distribution. He carried out gap analysis in relation to existing business practices and organization, set out a short term implementation plan, defined technology needs and new processes, tendered on behalf of the client for new systems and services, selected vendors and organized and oversaw the implementation process.

Enbridge Gas engaged Mr. Louth to review its customer care outsourcing arrangements with CustomerWorks and to make recommendations for improvement to contract contents when the arrangements come up for renewal. Mr. Louth was required by the Ontario Energy Board to present a formal report in this regard and to benchmark Enbridge's costs against those of other Canadian utilities.

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He led a recent project for the Egyptian Electricity Authority in Cairo, the objective of which was to develop a long-range information technology plan. The plan covered upgrading and revitalization of all systems running within the organization, following the merger of generation, transmission and distribution functions. The scope of the project included not only replacement of hardware and systems architectures, but also improvement of processes from point of generation to customer delivery and reorganization of the corporate information technology functions.

Terasen engaged Mr. Louth for a number of assignments. These included independent review of a proposal to develop an internal new CIS, similar review of a proposal to outsource customer care services to Enlogix and direct assistance to the team negotiating an outsourcing contract. In this project also, Mr. Louth was required to benchmark Terasen's proposed contract terms against other utilities that had outsourced customer care.

For the Asian Development Bank, he was engaged to assist the bank in the evaluation of potential aid projects in India and South-east Asia. These assignments involved the investigation of feasibility of project completion, assessment of proposed work plans, validation of projected benefits and assessment of the recipient country's proposals to resource the projects.

He was responsible for a number of shared services feasibility studies for Pacific Northern Gas and Centra Gas BC, two smaller gas utilities who were pursuing opportunities to cut costs by sharing services ranging from bill printing, remittance processing and financial services to pipeline capacity, accounting and operational systems.

In a broader context, Mr. Louth has been personally responsible for the end result of assignments for all DLAI energy clients referred to earlier in this document. He has participated as a guest speaker on energy industry related topics at a variety of conferences in Canada, the USA, Asia, Europe and Australia and is a frequent guest on radio and TV.

For further information or explanation of his credentials he can be reached at 604.267.2337 or at douglaslouth@shaw.ca

Appendix B

PROFESSIONAL PROFILE OF DOUG JONES

Doug Jones has over 30 years experience in the Information Technology industry, primarily in the role of management, senior consultant and executive. He is a successful consultant and project manager with a wide range of experience, particularly in the utility and health care industries.

His professional history is as follows:

MANAGEMENT CONSULTING

May, 2004 – Present (DLAI)

Used benchmark survey data to answer questions and prepare further analysis for a Canadian Electric utility.

Used benchmark survey data to prepare further analysis for a major Canadian utility.

Prepared a benchmark survey for a major Canadian Utility. Designed and prepared a questionnaire to gather Customer Care information on costs, service, volumes and contracts. Distributed the questionnaire to the majority of utilities in Canada and compiled the responses into a secure database.

Analyzed the data to prepare a benchmark report for the client and participants for comparative information.

October, 2003 – August, 2004

Provided training and guidance to the marketing and support divisions of a major telecommunications company.

Fulfilled the role of CIO in an executive team which provided real-world experience to participants in internal training.

March, 2002 – May, 2003

As Implementation Coordinator, worked with the British Columbia Provider Registry System (PRS) team and with the other western provinces on a number of common implementation tasks. Responsible for the preparation of an implementation plan specific to BC and to coordinate its execution in BC.

Co-coordinated the implementation activities and managed the task dependencies and priorities between four data Source organizations and four data Consumer organizations.

Kept the Source and Consumer organizations and the BC PRS development team informed of each other's activities and issues. Reviewed progress and resolved issues.

January, 2001 – September, 2001

Project Team Leader to prepare a Strategic IT Plan for a major hospital system in Jordan. This public organization consisted of nine hospitals with over 2,000 beds and covered over 1.5 million patients.

Completed an assessment of existing applications, hardware, systems software and network; outlined current trends, environmental impacts, and best IT practices. Documented systems weaknesses, risks and needs; recommended a generic solution to provide a fully integrated Hospital Information System, detailing application modules and business process relationships; identified the successful, leading edge vendors of hospital information systems, appropriate to Jordan.

PROFESSIONAL MANAGEMENT

Vice-president, Information Systems Pacific Blue Cross Vancouver, BC

September, 1989 – December, 2000

Mr. Jones was the executive responsible for the effective utilization of Information Technology, including computer hardware, software, networks and telephone system. Carried out: Strategic Planning; Creating annual Operating and Capital Budgets; Monitoring financial results; Setting annual Operating Plan and ensuring timely completion; Setting and attaining IS Service Level Objectives; Reviewing and approving cost/benefits for hardware and software; System acquisition, development and installation; Benchmarking and Establishing standards; Supporting existing systems; Fulfilling the duties of an officer of PBC; Leading 5 departmental managers and over 100 staff.

Oversaw the transition to client-server and web-based technologies.

Negotiated contracts for hardware, software, software development and outsourcing. Championed and ensured the successful completion of several strategic, new applications. These systems helped lower the organization's operating costs, provide faster claims payment, lower processing errors, allow direct access to information, match or exceed competitive offerings and generally improve customer satisfaction.

Directed the re-engineering of Claims Payment processing, and client/member Administration and Billing from largely paper-based systems to electronic commerce.

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Along with two other executives, directed the selection, contracting and implementation of an automated Call Center system. This system significantly improved the customer contact service and won an award.

Senior Consultant

DMR Group Inc.

Vancouver, BC

May, 1988 - August, 1989

Conducted several projects of a varied nature.

One of these was to privatize and restructure the Information Services divisions of a Major Utility.

Acted as Career Manager for over 30 DMR staff, who provided system development and maintenance for a major department store chain. Responsible for staff resourcing, training, performance management, career planning and reviews. In addition, was responsible for the standards, tools, and guides to be used for systems delivery, as well as Quality Assurance.

Director, Information ServicesLions Gate HospitalVancouver, BC

July, 1981 – April, 1988

Was responsible for Strategic Planning, Budgeting, Project Monitoring, Hardware and Software acquisition and Staff Development.

In just over three years, directed the implementation of a totally integrated, on-line Patient Care System, including modules for Admission, Discharge, Transfer, Central registry, Patient Abstracts, Nurse Station Communication, Dietary, Radiology, Accounts Receivable and Statistics. In addition, implemented Accounts Payable, General Ledger, Financial Support and Inventory Issues, and later added other modules such as Laboratory

Introduced the deployment and use of personal computers to the hospital.

Manager Vancouver, BC Peat, Marwick & Partners

September 1975 – June, 1981

Mr. Jones was responsible for the activities of several programmer analysts, plus an office systems consultant. As a consultant, gained experience in a variety of

Douglas Louth Associates Inc.

engagements. In many of these, successfully managed the participation of other members of the project team. Some examples are as follows:

- Information requirements study and equipment selection for a financial institution and a distribution company. Project managed the design and installation of an on-line interactive system in both cases.
- Establishment of a computer audit program for a major financial institution.
- Project management assistance for the installation of systems for accounting and management information for a real estate company; payroll/personnel system for a railway; revenue accounting system for an airline.
- Several engagements to review information needs and establish short and long range plans.
- Prepared a Strategic Plan for IT for a major Alberta utility.

Mr. Jones consulting expertise encompasses strategic planning, long range planning, systems analysis and design, and business process improvements. He also participates in golf, tennis, skiing, travel, community service.

Appendix C

WORK PLAN FOLLOWED BY DLAI

Milestone Delivery Date	Activity	Tasks
March 17	Initialization	1. Start-up meeting
		2. Develop work plan
		3. Develop questionnaire
		4. Discuss with Terasen Gas
		5. Finalize vendor list
		6. Develop vendor call script
March 31		7. Call to determine interested vendors
	Vendor Response	8. Discuss draft questionnaire with interested vendors
		9. Distribute questionnaire to vendors
		10. Resolve questions from vendors
April 22		11. Review responses
		12. Follow-up on questions to vendors
	Analysis	13. Develop analysis
		14. Present to Terasen Gas
		15. Assess additional factors relating to TGVI
		16. Consolidate findings
		17. Present to Terasen Gas
		18. Write report
		19. Discuss with Terasen Gas
May 9		20. Finalize and deliver report
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Appendix D

TABLE OF CONTENTS OF QUESTIONNAIRE USED TO SOLICIT INFORMATION FROM POTENTIAL SUPPLIERS

- 1. INTRODUCTION
- 2. PURPOSE OF THE QUALIFICATIONS QUESTIONNAIRE
- 3. CONDITIONS OF RESPONSE TO INFORMATION QUESTIONNAIRE
- 4. **RESPONSE REQUIREMENTS**
- 5. INFORMATION ON RESPONDENT'S BUSINESS
- 6. DESCRIPTION OF SERVICES REQUIRED
- 7. DESCRIPTION OF TECHNOLOGY PLATFORMS
- 8. COST PROJECTIONS APPLYING TO PROPOSED SERVICES
- 9. MINIMUM ACCEPTABLE SERVICE LEVELS
- 10. CONCLUSION

APPENDICES

- A. Respondent Business Information
- **B.** Deliverable Services
- C. Meter Reading
- D. Billing and Payment Processing
- E. Credit and Collections
- F. Call Centre
- G. Technology Platform
- H. Potential Supplier Existing Cost Information

Appendix C TERASEN GAS INC. – SELECTION PROCESS FOR CIS AND SYSTEM INTEGRATOR UPDATED AUGUST 28, 2009

THE ENCLOSED MATERIAL REPLACES APPENDIX C FILED AS PART OF



APPENDIX C – Selection Process for CIS and System Integrator

The Project includes the adoption of a new industry-standard CIS, which is the key technology platform on which the delivery of customer care services rests. Terasen Gas expects that the new CIS will provide a basis to meet evolving business and customer needs. In recognition of the fact that the CIS represents a large component of the Project costs, Terasen Gas engaged in a particularly rigorous process designed to identify: (1) its specific business requirements in a CIS, both currently and in the future; (2) the most cost-effective system to meet the requirements identified; and (3) the appropriate party to implement the technology. This analysis spanned a number of months. Terasen Gas' review process, described in this Appendix, identified a single candidate CIS and a single system integrator. Terasen Gas is confident that it has exercised an appropriate level of due diligence in undertaking this review.

Overview of Assessment Process

Below is a simple schematic that depicts the process that Terasen Gas undertook in making the recommendation for the new CIS implementation:



Figure 1 – CIS Replacement Approach



As described in Section 2, Terasen Gas engaged Micon Consulting to assist in the evaluation process. Micon has twenty-two years of experience in 100+ similar engagements. Micon's process, which Terasen Gas followed, was guided by the following principles:

- Forcing the vendors to be honest and truthful via a structured, detailed review process;
- Allowing the business areas to drive the process along with Information Technology (IT);
- Assuming the utility is best served by negotiating a fixed-fee contract;
- Assuming the Utility wants to know the exact number of changes/modifications to each commercial application to be purchased;
- Providing a process that allows management to know the alternatives (and related costs) at the start of the evaluation rather than at the end;
- Providing a methodology that utilizes detailed industry templates to facilitate and expedite the overall process; and
- Providing a process where the product vendor & system integrator are held accountable for documented and demonstrated functionality.



Each of the five phases of the evaluation process is discussed below.

Phase I: Develop Requirements and Alternative Solutions

In light of the key role played by the CIS in delivering Terasen Gas' customer care services, it is critically important that the CIS be able to meet existing business requirements and be sufficiently flexible to respond to evolving business needs. Thus, it was important for those involved in the assessment process to have a clear understanding of Terasen Gas' requirements from its CIS. This analysis is identified in the above schematic as Phase I: Develop Requirements and Alternative Solutions.

In engaging Micon Consulting, Terasen Gas utilized a proven methodology and a set of templates to meet the following objectives:

- Identify functional/technical requirements;
- Provide Industry Information;
- Develop various Alternative Solutions;
- · Identify Alternatives costs, timeframes and risk; and
- Select an optimum Alternative(s).

In terms of process in this first phase, Terasen Gas first held a series of workshops with key Terasen Gas resources to identify functional and technical requirements. Requirements can range from what data the system is capable of storing to specific functionality that the system must be able to support. By way of an example, a requirement for rate pricing would be:

"The System must allow each customer/contract/service agreement to have negotiated values for any or all billing components, charges, credits or discounts, and surcharges."

In excess of 3200 individual requirements were initially identified. Upon further detailed analysis, 2783 were deemed as requiring further evaluation. For the identified requirements, they were prioritized as follows:

- Priority 1 Functionality that exists today and required for go-live;
- Priority 2 Functionality not implemented today but required for the new system;
- Priority 3 Functionality not required for the initial implementation but would likely be required at a future date; and
- Priority 4 Functionality that is not required but considered "nice to have".

The purpose of this first phase, besides ensuring that Terasen had a detailed set of functional and technical requirements, was to narrow down the possible number of alternatives to the most likely to be successful prior to a larger, more expensive process. It was important to ensure that Terasen had a high level understanding of what was required, what its own capabilities were in supporting this initiative, and a high-level understanding on cost, duration and priorities. Through a series of workshops with Terasen Gas subject matter experts (SMEs), the detailed requirements were documented and prioritized. Once these requirements were documented, an additional series of workshops were facilitated by Micon with the key business and technology Terasen Gas SMEs to evaluate various implementation alternatives such as software vendor, implementation approach, resourcing mix of Terasen Gas staff and consulting support required and timeline. The outcome of these workshops provided Terasen Gas with focus and an industry standard benchmark which was presented to the executives.



Phase II: Determine Software Vendor Candidates

Phase II of Terasen Gas' analysis was to identify appropriate software vendor candidates. Terasen Gas considers it important that the CIS vendor have a good track record, and strong potential for longevity as demonstrated by their position in the marketplace as well as an indication of their continued investment in their product. The CIS market has undergone significant changes, and Terasen Gas anticipates that further changes are likely. Terasen Gas' preferred CIS providers have been identified as industry leaders. They have a demonstrated commitment to long-term investment and support of the customer base and a strategy to keep abreast of the changes that are likely to come up in the future.

Although Micon has extensive practical experience in this subject matter, Terasen Gas utilized the research firm Gartner as a valuable resource to provide additional independent information about the state of various technologies. Terasen Gas was already aware of the major players in the CIS marketplace but utilized the research from Gartner to supplement its own knowledge as well as access details that would not be available to Terasen on its own. Gartner provides this analysis in a documented format known throughout the IT industry as the "Magic Quadrant". The "Magic Quadrant" is Gartner's way of categorizing what it believes are the Leaders, Challengers, Visionaries, and Niche players in the specific area being evaluated based on various criteria including, but not limited to, Product & Service, Overall viability, Customer experience, etc.

The Gartner "Magic Quadrant" evaluation of the current CIS vendor marketplace that follows below indicates two clear leaders in the industry.

According to Gartner, "Leaders are those vendors that would normally be included in shortlists for CIS products, for all types of utilities, worldwide. They perform profitably, grow their revenue and have a presence in all major markets. Their functionality is above average, and their technology and scalability are leading edge. They offer solutions for retailers in different market models (such as regulated and competitive) and support large utilities with multiple commodity offerings as well as small single-commodity utilities, along with utilities focused on different customer segments. These vendors would be followed and tracked by other CIS vendors."

¹ Gartner Publication ID Number: G00168517. Magic Quadrant for Utilities Customer Information Systems. Publication date: 15 June 2009



Figure 2 – Magic Quadrant



As of June 2009

According to the Gartner report, leaders in this market have paired advanced technology with broad offerings and rich functionality. They are utility vertical businesses of the leading enterprise application vendors (such as SAP and Oracle). They have demonstrated the financial viability needed to fuel R&D to support new technology requirements (such as Web services and SOA) and enable business process integration across functional silos in utilities. SAP attained leadership status in 2003, and reconfirmed it due to the combined effects of its significant market share globally and continuing R&D investment in integration technologies and productized competitive market interface extensions. Oracle Utilities (then SPL WorldGroup) attained leadership status in 2004, and retained its leadership status in this rating due to improved corporate viability following acquisition by Oracle, solid business performance and future access to a corporate integration technology platform that can support the continuing drive for functional footprint extension.

According to Gartner, "The Niche Players quadrant are situated here because of a geographical shortfall, narrow focus or lack of financial strength (that is, they have not achieved financial viability compared to the market leaders), or they have not come as far as the leaders in advancing their technologies or functionality. This prevents them from being universally suitable to all customers. Clients should review carefully the vendors' target markets and capabilities; they should include them in evaluations if the vendors match their business scope, geographic



areas and specific needs."² Hansen, the vendor of the Peace system, is noted by Gartner to be one of the niche players.

Based on market research from Gartner, the experience of Micon, and discussions with other utilities in a similar situation (Enbridge and Enmax), there were two clear leaders in the CIS space: SAP with its CCS modules and Oracle (through the acquisition of SPL). Given the relative marketplace dominance of these two software vendors, Terasen Gas decided to issue the RFP only to them.

Phase III: Conduct Detailed Product Assessment

Phase III of the process for selecting a preferred CIS involved Terasen Gas, with the assistance of Micon, soliciting information from the identified providers, SAP and Oracle, through a Request for Proposal ("RFP") process regarding how their software products met Terasen Gas' requirements identified in Phase I. The RFP documents identified the detailed requirements to be addressed. The instructions for the software vendors were to respond to each requirement as to whether the requirement could be met in the base system, through configuration, through a user exit, through system modification, through a future release or "not supported". The categories represent the relative effort required to implement and support each of the requirements. Typically, a requirement that can be met "in Base System" is relatively easy and cost effective to implement and support, while "Requires Modification" traditionally is the most complex. In future releases implies a decision by Terasen Gas to modify the application to meet the requirement or work around the requirement until the new release is installed. A brief description of each of these categories is outlined below:

• In Base System -

To qualify for this category, the requirement would be met as base functionality "out of the box" or enabled just with the implementation of the system requiring no other intervention.

• Requires Configuration -

To qualify for this category, the requirement would be met by utilizing capabilities inherent in the product. An individual would be able to set parameters in the system or "configure" the system to enable the desired functionality.

• Requires User Exit -

It is recognized by these software vendors that there are logical points in the functionality of a system where the company implementing their solution could have a very specific requirement to meet certain business outcomes such as rate formulas. A User Exit is a term given to that specific logical point. The software package code will hand off program logic to the "user exit" where the customer specific code will execute and then hand the program logic back to the package code. This allows the customer to

² Gartner Publication ID Number: G00168517. Magic Quadrant for Utilities Customer Information Systems. Publication date: 15 June 2009



implement their specific business rules without compromising the integrity of the software package.

• Requires Modification -

Modification is the term when no user exit capability is available as described above. The software package must be changed or "modified" to meet the business requirement. This is much less desirable than the ability to use user exits as this compromises the ability of the software vendor to support the product as these modifications are not known to the vendor and the implication to the functioning of the rest of the system is unknown.

• Available in Future Releases -

To qualify for this category, the requirement would be met by functionality that does not exist in the current version of the software but is planned to be made available either in base system, configuration or a new user exit in a future version of the product. In cases where this was identified, the future version and generally available release date were required.

• Not Supported -

As the category implies, the requirement can not be met through any conventional means within the product capability, not planned in any future release at this time and any system modification required to implement would be of such risk that the software vendor would not support its implementation thereby jeopardizing future support.

Also required in the responses was the estimated work day effort to implement the requirements.

Upon receipt of the RFP responses, it was determined that both solutions could meet the requirements, although not in exactly the same way. The next phase of the evaluation was for the vendors to demonstrate "how" these requirements would be met. Terasen Gas created hundreds of test script scenarios to have the software vendors demonstrate how the key requirements would be met. Demonstration workshops for the following categories were conducted with each software vendor over a period of eight days for each vendor. The Terasen Gas subject matter experts for each category who created the test scripts and could best understand the expected results as well as evaluate how those requirements were met participated in the various workshops. The key categories that were demonstrated were:

- Premise Information;
- Billing;
- Credit & Collections;
- Customer Choice, Web Access, and Marketing;
- Rates & Pricing;
- Cash Processing;
- Revenue Accounting;
- Meter & Equipment;
- Meter Reading;
- Customer Service Field Work;
- Reporting & Analytics; and
- Technical Overview.



An example of the details required to be demonstrated for a category is below:

- CREDIT AND COLLECTIONS
 - Credit and Collections Notes;
 - o Third Party Notification;
 - New Service Request;
 - Cash Only Accounts High Credit Risk Alerts;
 - Internal Credit Score;
 - Security Deposits;
 - Collection Rules and Activities;
 - o Payment Agreements;
 - Returned Items;
 - Bad Debit Charge Off;
 - Notification of Bankruptcy;
 - Collection Activity Performance;
 - Collection Reports;
 - Non-cash Deposits; and
 - Security Deposit Maintenance.

The demonstration workshops are a key component of the evaluation process. The purpose of the demonstration workshops is to provide Terasen Gas with a clear demonstration of how the system could meet the requirements in a "real-life" scenario. Based on past experience, we believe that although a requirement could technically be met by a software product as per the written responses to the functional requirements criteria, the way in which that requirement is met can be so unnecessarily complex or cumbersome that the proposed solution would not be acceptable to Terasen Gas. These workshops provide a good opportunity to ensure that a clear interpretation of the requirement can be demonstrated by the Software Vendor to Terasen Gas and that the way that the system meets that requirement is in a manner that would be acceptable to Terasen Gas.

An additional outcome of the workshops is to provide the opportunity to identify any new requirements that may have been missed in the original requirements document or to clarify any questions or issues as a result of seeing how specific requirements are met. Upon conclusion of the demonstration workshops, each vendor was directed to respond to a Request for Quotation (RFQ) document to be used in the final evaluation.

Upon receipt of the RFQ responses, Terasen Gas evaluated the responses and determined that both SAP and Oracle could meet the Company's requirements.

The criterion on which the evaluation was based was:

- The ability to meet functional specifications:
 - o Customer/Premise Information;
 - Rates & Pricing;
 - o Billing;
 - o Cash Processing;
 - Customer Service/Field Work;
 - Revenue Accounting;



- o Credit & Collections;
- Meter Reading;
- Metering & Equipment;
- Marketing;
- Reporting;
- o Web Access; and
- Customer Choice.
- The ability to meet technical specifications:
 - Technical Architecture;
 - System Administration;
 - System Operations (versioning, production, maintenance);
 - o Data Architecture; and
 - Interface & Conversion.
- Test Scripting evaluations:
 - o Customer/Premise Information;
 - Rates & Pricing;
 - o Billing;
 - Cash Processing;
 - Customer Service/Field Work;
 - o Revenue Accounting;
 - Credit & Collections;
 - Meter Reading;
 - o Metering & Equipment; and
 - o Marketing.
- Vendor Profile:
 - Established Vendor;
 - o Direction and Focus;
 - Product Training;
 - Release Enhancement Process;
 - Utility Industry History;
 - Product Funding;
 - o Litigation;
 - o User Groups;
 - o Research and Development; and
 - o Quality Assurance.
- Software product Profile:
 - Proposed Product Version;
 - Release/Version Planning;
 - o Service Packs;
 - o Initial Proposed Products Implementation; and
 - Completed Implementations.
- Contractual Agreements:
 - License Agreement Costs;
 - o License Terms and Conditions;



- o Software Maintenance Fees; and
- Maintenance Agreement Terms and Conditions.
- Client References

Terasen Gas believes that the above criteria addressed all of the key considerations that each vendor had to respond to. They reflect Terasen's priorities and are consistent with Micon's experience in similar processes with other clients. While each product had its strengths and weaknesses, neither product was able to clearly demonstrate an overwhelming advantage over the other from a functionality standpoint. Terasen Gas elected to continue the evaluation with both products to determine the costs associated with implementation, integration with the rest of the Terasen Gas systems, and ongoing support to determine the overall costs of the new CIS solution prior to making a selection.

Phase IV: System Integrator Selection

Phase IV of the process was to select a system integrator (SI) for the CIS solution. A SI is the industry term for the 3rd party consulting support that a company requires to assist in the implementation of a software solution. Terasen Gas solicited both of the software vendors that had been identified as industry leaders in Phase II for their recommendation as to companies that would be best suited to implementing a CIS for Terasen Gas. Terasen Gas sought proposals based on the recommendations.

In cases where the SI had an SAP and an Oracle practice, they were encouraged to provide proposals for both solutions; however, no SI expressed intent to bid on both solutions. Only Blue Heron Consulting, an Oracle specific SI, indicated they would submit a proposal for the implementation of Oracle. Although having both SAP and Oracle practices, IBM, Accenture, and Cap Gemini all indicated they would be submitting proposals for an SAP implementation only. HCL Axon, an SAP specific SI, also indicated they would respond if asked. Deloitte and Wipro chose not to bid.

The overall approach for the selection of the SI was as follows: (1) issue an RFP; (2) shortlist based on the information provided in the responses; (3) clarify any outstanding details with the shortlisted SIs; (4) issue an RFQ; (5) shortlist respondents based on information provided in the RFQ if applicable; (6) conduct oral presentations with the shortlisted SIs; and (7) make a recommendation on the CIS solution based on information regarding the SI and information obtained through the software selection process. It was imperative for Terasen to understand the total cost of ownership for the recommended solution, not only in terms of acquiring and implementing the solution, but also the costs related to ongoing support for the solution. Terasen believed very strongly that it is only through a consideration of the combination of all of the elements that an informed decision could be made.

Terasen Gas issued an RFP document for the implementation of the software. Along with the same detailed functional and technical requirements that were provided to the software vendors, the SI's were to provide resourcing, time and cost estimates. The workday effort for each requirement as well as the categorization of each requirement as outlined above provided to Terasen Gas from the software vendors were included in the RFP. The direction was that if any



vendor took exception to the categorization or effort that was provided by the software vendors, then it was up to the SI and the vendor to reach consensus on the point and have it reflected in their response.

Based on the information provided in the RFP, Cap Gemini was eliminated from further evaluation after being gauged against a short listing criteria that consisted of:

- Vendor Qualifications;
- Work Plan;
- Pricing; and
- Client References.

Conference call debriefs were conducted with each SI after the RFP responses were evaluated to clarify requirements, RFP response details, and to highlight areas of specific focus for Blue Heron, IBM, Accenture and HCL Axon to incorporate into their response to the following RFQ.

Upon receipt of the responses from the SIs to the subsequent RFQ, Terasen Gas employed the same shortlisting criteria as was utilized in the RFP to arrive at a further shortlist. The rationale for using the same criteria was that it still represented the key decision criteria that Terasen felt was important. The RFQ process just allowed for greater levels of detail based on the clarifications from the RFP process. The candidates shortlisted were Blue Heron proposing an Oracle implementation and HCL Axon proposing an SAP implementation.

Terasen Gas requested oral presentations from both Blue Heron and HCL Axon, in which the candidate SI's outlined the details of their proposals. The oral presentations also provided the SIs (accompanied by the respective software vendor representation) with the opportunity to clarify any outstanding issues or questions in an interactive session with Terasen as to how each solution could best meet Terasen Gas' needs.

After oral presentations, Terasen Gas developed the overall decision criteria for the new CIS solution and implementation. Combining key elements of the software vendor and SI criteria, the overall solution criteria was developed as follows:

- Product Vendor:
 - Functional specifications met;
 - Vendor profile; and
 - Technical architecture / strategic fit.
- System Integrator qualifications:
 - SI company profile;
 - Relevant experience / reference calls;
 - Proposed personnel;
 - o Implementation Methodology; and
 - o Resource Availability.
- Work Plan:
 - Estimated work days;
 - Level of detail; and
 - o Use of Resources / resource mix with Terasen Gas Inc.



- Pricing:
 - o Total implementation costs;
 - Transition / support costs; and
 - Ongoing software maintenance costs.

Based on the above criteria, Terasen Gas determined that an SAP solution implemented by HCL Axon was the best proposal. As stated previously, it was the combination of the costs associated with acquiring and supporting the software as well as the costs and quality of the system integrator proposal on which the final decision was predicated.

Phase V: Conduct Contract Negotiations

Having successfully concluded Phase I through Phase IV, Terasen Gas is currently in contract negotiations with SAP and HCL Axon.

Appendix C TERASEN GAS INC. – SELECTION PROCESS FOR CIS AND SYSTEM INTEGRATOR UPDATED AUGUST 28, 2009

THE ENCLOSED MATERIAL REPLACES APPENDIX C FILED AS PART OF

Appendix D TERASEN GAS INC. – REQUEST FOR QUOTATION – CUSTOMER INFORMATION SYSTEM (CIS) REPLACEMENT PROJECT – PHASE 1 – CUSTOMER INFORMATION SOFTWARE SELECTION

PLEASE REFER TO

Appendix E TERASEN GAS INC. – REQUEST FOR QUOTATION – CUSTOMER INFORMATION SYSTEM (CIS) – SYSTEM IMPLEMENTATION

PLEASE REFER TO

Appendix F IPSOS REID – TERASEN GAS CUSTOMER CARE RESEARCH FOCUS GROUP REPORT

PLEASE REFER TO

Appendix G ANGUS REID STRATEGIES– TERASEN GAS CUSTOMER SERVICE ENHANCEMENTS REPORT

PLEASE REFER TO

Appendix H DRAFT ORDER - JUNE 2, 2009

PLEASE REFER TO

Appendix B UTILIPOINT INTERNATIONAL INC. – OUTSOURCED CUSTOMER SERVICE MODELS IN THE NORTH AMERICAN UTILITY INDUSTRY AND BEYOND

ADDENDUM TO JUNE 2, 2009 APPENDIX B ENCLOSED

FOR ORIGINAL FILED CONTENT PLEASE REFER TO

Profiles of Customer Care - Customer Service Case Study: ATCO Gas and ATCO Electric

Profile of Company

Alberta-based ATCO Ltd., with more than 7,700 employees and assets of approximately \$9.8 billion, delivers service excellence and innovative business solutions worldwide with leading companies engaged in Utilities (pipelines, natural gas and electricity transmission and distribution), Energy (power generation and midstream services), Structures & Logistics (manufacturing, logistics and noise abatement) and Technologies (business systems solutions).

The Utilities Group of companies is focused on the safe, reliable transportation and delivery of natural gas, electricity and water. Located mainly in Alberta and the Canadian North, they serve more than one million customers in nearly 300 communities. The Utilities Group includes ATCO Pipelines, ATCO Gas, CU Water, ATCO Electric and its subsidiaries Northland Utilities and The Yukon Electrical Company. Albertans have also come to trust the friendly, expert advice and services offered by the ATCO EnergySense program and our famous ATCO Blue Flame Kitchen.

ATCO Gas is an Alberta based, province-wide natural gas distribution company, serving more than one million customers in nearly 300 Alberta communities. ATCO Gas is headquartered in Edmonton, Alberta and has 62 district offices across the province. Employees live and work in the communities they serve, building, operating and maintaining an extensive network of distribution pipelines. ATCO Gas provides service to municipal, residential, business and industrial customers. The company's core business is owning and operating a safe, reliable natural gas distribution system. In 2008, ATCO Gas responded to nearly 600,000 service calls and spent nearly \$250 million on capital projects to maintain and expand its system.

•ATCO Gas has more than 2,000 employees

•ATCO Gas owns and operates more than 37,000 kilometres of distribution pipeline throughout Alberta •ATCO Gas provides expert advice through ATCO EnergySense and ATCO Blue Flame Kitchen ATCO Gas is on call 24 hours a day to respond to gas odour calls and emergencies involving natural gas.

ATCO Electric serves more than 200,000 customers in northern and east-central Alberta – resource rich areas of the province where electricity is an essential component of industrial development. The company has nearly 80 years experience in serving this challenging, diverse territory. ATCO Electric is headquartered in Edmonton and has 38 offices throughout its service area in Alberta. The company builds, operates and maintains a safe, reliable system of transmission and distribution lines, delivering power to homes, farms and businesses, in cities, towns and Aboriginal communities – 245 communities in all. ATCO Electric also pursues regulated and non-regulated distribution and transmission projects. ATCO Electric has played a key role in the development of Alberta's industrial sector.

•ATCO Electric has more than 1,400 employees

•ATCO Electric operates and maintains more than 69,000 km of transmission and distribution power lines •The company operates an additional 12,000 km of distribution power lines on behalf of Rural Electrification Associations

•In 2009, ATCO Electric introduced the Alberta utility industry's first hybrid maintenance vehicle to its fleet. ATCO Electric is on call 24 hours a day to respond to power line and related emergencies.

Through its subsidiaries – Yukon Electrical, Northland Utilities (NWT) Limited and Northland Utilities (Yellowknife) Limited – the company also serves customers in Canada's North.

Profile of Customer Service Organization

Structure

ATCO Gas and ATCO Electric have outsourced its customer care and billing and information technology to an affiliate company ATCO I-Tek. ATCO I-Tek delivers billing flexibility, superior customer care, and reliable information technology solutions to a diverse group of clients that operate around the world. Headquartered in Edmonton, this disciplined business-to-business service provider has proven processes and controls. ATCO I-Tek has a team of approximately 1,000 people focused on helping clients meet critical business needs.

ATCO I-Tek's experience in regulated and deregulated energy markets and its flexible billing system provide a significant benefit to retail, distribution and integrated utility clients. The company offers end-to-end services – call centre, billing, payment processing, and credit and collections – in one of the most complex industry structures in North America.

ATCO I-Tek manages more than 2.4 million customer relationships, answers more than 1.9 million customer calls, produces more than 11.8 million statements, processes more than 10.6 million payments, and collects nearly \$3 billion on behalf of clients each year.

ATCO I-Tek provides the people, processes, technology and applications to help clients achieve business goals, improve productivity, manage IT costs, and improve IT security and asset management. The company offers full lifecycle management for a diverse suite of services and technologies including: workstation, server, network and security services; mobile workforce solutions; voice systems; infrastructure planning and implementation; and technical support.

Clients also benefit from ATCO I-Tek's expertise in business application strategy, architecture, development, integration, maintenance and enhancement. ATCO I-Tek supports more than 900 desktop and specialized business applications.

Key Successes

The ATCO utilities claim to have received superior customer service for its utility clients from affiliate ATCO I-Tek. In addition, ATCO I-Tek has signed a significant new customer as a result of ATCO divesting its retail business to Direct Energy. It now serves the customer care and billing needs of Direct Energy as well as the ATCO utilities.

The systems remained owned by the utilities, including ATCO CIS, which was developed specifically for the ATCO utilities originally. It is now also used for serving the Direct Energy business as well. By owning the systems and the core business processes, the ATCO utilities can have influence over the service provider ATCO I-Tek. This is a key element of outsourcing where other utilities have either sold the systems or sold control of the business processes to third parties. By retaining both, ATCO utilities have limited issues with the service provider ATCO I-Tek.

Key Challenges

In the early 2000's Alberta deregulated its province. The process meant many changes to systems, new systems, processes, and regulatory requirements. At the same time ATCO was selling its retail customer base to Direct Energy. Many of the distribution and retail utilities serving customers in Alberta at the time experienced severe difficulties billing and providing basic functionality for exchanging of data and settling wholesale to retail. The Commission mandated major changes to systems via what was called the Bill Tariff Code.

Enabling Technologies and Strategies

ATCO utilities currently own ATCO CIS, a customer information system developed for servicing the utilities in Alberta. It is augmented with commercial off-the-shelf adjacent technologies such as databases and an interactive-voice-response system. It also serves as a distribution company CIS by servicing the needs of ATCO Gas and ATCO Electric and also as a deregulated CIS by servicing the retail needs of Direct Energy in the same province.

Outstanding/Notable Business Processes or Best Practices

Of note for ATCO should be the fact that it retains ownership and control of the systems and the business processes. While it has outsourced the business process function to ATCO I-Tek, it retains the ability to modify business processes should the need arise. In a deregulated province, flexibility is the key to success.

Recommendations on the Uniqueness of Model

UtiliPoint believes that in any outsourcing relationship, owning control over the business processes is critical. For some that means having the business processes in-house and for some it can be outsourced as long as the utility retains control over the business process. Ownership of the systems is not required for success but may help in a rapidly changing environment such as a deregulated province. For the utilities that have outsourced and are entertaining repatriation or selective sourcing as a renewal strategy, the loss of business processes and the ability to change them is a key factor in its decision making process. ATCO recently undertook a major study to evaluate three alternatives at the end of the outsource contract life. Those three alternatives were repatriation, outsource to a new provider via a formal RFP process, or renew the contract with the current provider ATCO I-Tek. The result of that study is to renew the contract with ATCO I-Tek. This study is now being reviewed by the Alberta Utilities Commission.

Customer Service Case Study: ENMAX

Profile of Company

ENMAX Corporation is an energy distribution, supply and service company. It is a wholly owned subsidiary of The City of Calgary, headquartered in Calgary, CANADA. ENMAX operates and competes in Alberta's restructured electricity industry. In 2007, the company had shareholder's equity of \$1.459 billion and net earnings of \$141.8 million.

ENMAX is a vertically integrated company. It participates in energy generation (through supply contracts, wind power and run-of-river projects), transmission, distribution, retail and customer service. The approach helps ENMAX provide better service to customers and balance the risks of the energy industry via diversity.

Over the next five years, ENMAX plans to grow its customer base and products offered. It believes the growth will help it to remain competitive and to create shareholder value.

Profile of Customer Service Organization

Structure

Accenture was originally awarded a ten-year contract to provide Enmax with business process outsourcing services related to billing inquiry, credit & collections, meter reading, call centre and emergency and service call center management in 2003. The original agreement was not won under a bid process but was sole sourced to Accenture within management negotiations. The structure of the original deal was complicated by the fact that Enmax already outsourced its CIS/billing system to Toronto-based Enlogix. Enlogix has since changed hands twice to Alliance Data and now UK-based Vertex. The original Accenture deal had to be "wrapped around" the Enlogix portion of meter-to-cash. Enlogix (then Alliance Data) provided the CIS/billing while Accenture provided all other meter-to-cash functions.

Enmax has since adopted a strategic sourcing strategy and at one point looked like it may leave the call centre sourced while bringing all other functions back in-house. At this point, Enmax has decided to bring all functions back in-house. The call centre has already been brought back in-house and the CIS/billing applications were converted and went live from the original Enlogix application to SAP earlier this year.

Key Successes

The original deal with Accenture was done for two reasons: Alberta was deregulating and the internal staff had problems serving customers. The thought was that by sourcing to Accenture, the problems would get resolved and a party with experience in deregulated markets (Accenture) would help to unbundle the systems and processes required to serve an open retail market. Accenture did help get the systems in place for an unbundled Alberta market.

Key Challenges

Since the deal was not procured via RFP, the contract did not favor Enmax. Getting quotes for modifications would cost the company a large amount of money and the labour market in Alberta was such that the call centre was experiencing up to 125% attrition rate. Enmax found that its service provider had to move support off-shore to stay competitive and when it did so, quality suffered. The major challenge was the loss of the business process ownership. Enmax felt that it could not manage its own business processes anymore.
Enabling Technologies and Strategies

The CIS has been the key enabling technology, especially in an unbundled province. With that said, the Enlogix platform is an earlier version of what is known in the industry as Banner. Banner has never been well suited to deregulated markets. Enmax has procured SAP and has implemented it at the time of this report. It has brought the CIS function back in-house for more control.

Outstanding/Notable Business Processes or Best Practices

Enmax does not have a favorable outlook on its outsourcing experience for meter-to-cash BPO. When asked about notable business processes, it answers that it has lost control of business processes and cannot be flexible in the market, something which is required of a deregulated province.

Recommendations on the Uniqueness of Model

Enmax represents one of the few examples of a utility that is on its second go-round of a major business process outsourcing contract. It decided to take a strategic sourcing approach evaluating each business processes for what should be sourced and to who. After undertaking that study internally, it decided to bring all functions and business processes back in-house, or to repatriate all services. It is not to say that pieces of business processes or specific functions like application hosting, support, and maintenance could not be outsourced at some point in the future. For now, it has repatriated all services back in-house.

Customer Service Case Study: Hydro One

Profile of Company

Hydro One launched in May 2000. It is a holding company with four operating subsidiaries. It emerged from the restructuring of Ontario Hydro as the owner and operator of the wires operations formerly provided by the provincially owned utility. The company employs approximately 4,000 full-time staff across the province. Its vision and mission are defined as follows:

MANDATE

A government-owned commercial enterprise with an independent Board of Directors, providing safe, reliable and cost effective transmission and distribution of electricity to Ontario electricity users

VISION

Hydro One will be the leading electricity delivery company in North America

VALUES

Safety • Stewardship • Excellence • Innovation

STRATEGIC OBJECTIVES

- · Injury-Free Workplace
- Satisfying Our Customers Affordable, Reliable and Clean Power
 - Continuous Innovation, Connecting Renewables
- Reliable Transmission and Distribution
 Protecting the Environment
- Recruitment/Knowledge Transfer
 Shareholder Value
 Productivity

Hydro One Networks Inc. owns and operates Ontario's 28,600 km high-voltage transmission system. The system transports electricity to 67 large industrial customers, 55 local distribution companies, and its own low-voltage distribution business.

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Profile of Customer Service Organization

Structure

Capgemini and Vertex-UK was originally awarded a ten-year contract to provide Hydro One with business process outsourcing services related to customer service operations (including the call centre), human resources, supply chain services, finance & accounting, and information technology in 2003 under the name inergi. The original agreement was not sourced with gain-sharing or process improvement in mind. It was instead what the industry refers to a "lift and shift," or moving Hydro One human resources to Capgemini and Vertex-UK. The assets (systems, call centers, etc.) remained owned by Hydro One. The business processes including Union contracts were moved to Capgemini and Vertex.

Hydro One has since adopted a strategic sourcing strategy and is currently evaluating going to market for selective sourcing, or reserving the right to repatriate certain services and outsource certain services.

Key Successes

The original deal with Capgemini and Vertex was done for one reason: save money by allowing the outsourced service providers to do the same work for less. To a certain extent, this has been achieved but has not been optimal since specific gain-sharing was not a part of the original deal.

Key Challenges

Since the deal was a "lift and shift," specific gain-sharing and asset optimization was not encouraged. This deal also occurred in a period when large scope deals were popular. TXU outsourced its entire back-office to Capgemini after Hydro One had done the same. It has since become apparent to utilities that have done these very large deals that one service provider is most likely good at a specific aspect of the outsourcing, but not all aspects. Hydro One did lose control over its business processes to a degree due to minimal investment in governance. It has since added significant resources to its governance function in order to manage the service provider.

Enabling Technologies and Strategies

The CIS has been the key enabling technology, especially in a changing province. Hydro One has maintained ownership of its CIS, which is a legacy Customer/1 application. The province of Ontario has deregulated which brought many changes with it and now is experiencing a mandated smart metering rollout. These changes have caused Hydro One to look at replacing its CIS which is scheduled to begin in several years.

Outstanding/Notable Business Processes or Best Practices

Hydro One has recognized its need for expert consulting in the area of utility outsourcing and has since brought in several consultants to help it on benchmarking its operations to market and on its governance process. The result has been a better alignment of its service provider to market and a closer working relationship than what it had when it started the outsourcing years ago. It has also recognized the need for a strategic sourcing effort to evaluate what should be repatriated and what should stay sourced and to whom.

Recommendations on the Uniqueness of Model

Hydro One, like Enmax is one of the few examples of a utility that is on its second go-round of a major business process outsourcing contract. Unlike Enmax, however, it has outsourced much of its back-office including human resources, supply chain services, finance/accounting, information technology, in addition to customer service operations. It decided to take a strategic sourcing approach evaluating each business process for what should be repatriated, sourced and if sourced, to who. This study is ongoing at the time of this report. UtiliPoint believes that HydroOne should make its decisions with ownership of business processes in mind. Regardless of what it repatriates or sources, owning the business processes and having the ability to make changes in a province that is continually changing is a key aspect for success.

Customer Service Case Study: SourceGas (formerly Kinder Morgan Retail)

Profile of Company

Headquartered in Lakewood, Colorado, and with regional offices throughout Nebraska, Wyoming, Colorado, and now Arkansas, SourceGas serves over 420,000 customers and operates 17,700 miles of distribution, gathering and transmission pipeline, as well as storage facilities. SourceGas and its subsidiaries also provide gas transportation, inhome HVAC and appliance service and sales, as well as gas commodity sales services to its natural gas customers.

Profile of Customer Service Organization

Structure

SourceGas, originally known as Kinder Morgan Retail, outsourced its customer care and billing to Alliance Data Systems who served out the first 10 year contract for meter-to-cash BPO services. The second contract was originally awarded to Accenture. The scope was CIS hosting, call center, and print/remit services. After encountering issues related to outsourcing, SourceGas has decided to repatriate all services. The call center was being done by Accenture in Ontario and is now done in-house in Arkansas. The CIS was Peace Software and is now being transitioned in-house to SAP.

Key Successes

The original deal with Alliance Data Systems was deemed successful and was done to reduce costs and allow SourceGas to focus on its core competency of providing natural gas to its customers reliably and safely. The second outsourced contract was influenced by an acquisition and divestiture of Terasen by then parent company Kinder Morgan. The original deal with Accenture was deemed a success because it was leveraging Terasen's provider and allowed Accenture to give advantageous pricing to then Kinder Morgan Retail.

Key Challenges

After awarding the second contract to Accenture, Kinder Morgan sold the Terasen retail business which again changed the scope of the deal. Since the deal was based on combining two utilities into one and leveraging one service provider, it now became a conversion from one to another. The CIS (Peace) was acquired by FirstData and then later sold to Hansen, which provided complications for other areas such as print and remit. SourceGas ultimately felt like it had lost control of the business processes and decided to repatriate.

Enabling Technologies and Strategies

The CIS has been the key enabling technology for providing customer service. SourceGas unfortunately experienced multiple shifts in strategy and ownership, first with the acquisition and divestiture of Terasen and then with the two acquisitions of the CIS provider Peace Software.

Outstanding/Notable Business Processes or Best Practices

SourceGas had an excellent working relationship with its service provider. The governance it used was most likely understaffed yet the quality of the resources involved was top notch. The relationship that SourceGas kept with its service providers was best practice.

Recommendations on the Uniqueness of Model

SourceGas had a small scope that was relatively easy to manage as far as outsourcing is concerned. It became complicated with strategy changes, CIS changes, and eventually loss of business process control. The key element that is constant across many case studies is the ability to keep control over the business processes. The utilities that lose control over the business processes have issues to resolve that sometimes result in repatriation or selective sourcing. SourceGas is repatriating services to regain that control.

Appendix J TERASEN GAS INC. SERVICE QUALITY INDICATOR RESULTS 2003 - 2009

	Performance Indicator	Benchmark	2003 Annual Actual	2004 Annual Actual	2005 Annual Actual	2006 Annual Actual	2007 Annual Actual	2008 Annual Actual	2003 - 2008 Average	2009 YTD July Actual
1	Emergency Response Time - Time Dispatched to Site - Emergency - Blowing Gas	≤21.1	22:00 minutes	21:36 minutes	21:42 minutes	21:30 minutes	20:36 minutes	20:42 minutes	21:35 minutes	23:18 minutes
2	Speed of Answer – Emergency (% of calls answered within 30 sec.)	≤95.0%	96.3%	97.9%	98.8%	98.6%	98.4%	98.3%	98.0%	98.1%
3	Speed of Answer – Non-Emergency (% of calls answered within 30 sec.)	≥75.0%	76.4%	77.5%	76.9%	78.2%	76.9%	73.8%	76.6%	76.6%
4	Transmission Reportable Incidents	≤2	3	3	3	1	1	2	2	0
5(a)	Index of Customer Bills Not Meeting Criteria	≤5	2.63	1.93	1.97	0.77	2.30	7.53	2.86	4.70
5(b)	Percent of Transportation Customer Bills Accurate	≥99.5%	99.8%	96.6%	99.9%	99.9%	99.5%	94.3%	98.3%	93.4%
6	Meter Exchange Appointment Activity	≥92.2%	92.6%	93.5%	94.3%	94.1%	93.5%	94.5%	93.8%	95.1%
7	Accuracy of Transportation Meter Measurement First Report	≥90.0%	97.4%	98.0%	99.5%	98.1%	98.9%	96.2%	98.0%	99.1%
8	Independent Customer Satisfaction Survey	Compared to prior years	73.9%	73.9%	77.2%	77.9%	79.3%	79.7%	77.0%	80.0%
9	Number of Customer Complaints to BCUC	Compared to prior years	101	191	121	152	130	90	131	35
10	Number of Prior Period Adjustments	Compared to prior years	24	18	14	21	23	15	19	14

	Directional Indicators								
1	Leaks per Kilometer of Distribution Mains	N/A	0.0040 134	0.0045 150	0.0034 120	0.0021 76	0.0024 87	0.0016 57	0.0030 104
2	Number of Third Party Distribution System Incidents	N/A	1,459	1,492	1,457	1,508	1,545	1,574	1,506

Items highlighted in blue are Service Quality Indicators directly related to Customer Care functions.

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Appendix K FINANCIAL SCHEDULES, AUGUST 28, 2009

Financial Schedule 1 Customer Care Enhancement Project Estimated Project Implementation Costs in \$000s

TGI Component	Reference	Total	2009	2010	2011	2012
Capital - CIS Implementation						
1 Consulting		43,414	1,346	14,230	22,789	5,049
2 Internal Labour		5,823	-	4,885	938	-
3 Expenses		996	-	731	265	-
4 Software		6,331	-	2,241	3,444	646
5 Hardware	-	7,607	163	3,349	3,683	412
6 Subtotal		64,171	1,509	25,436	31,119	6,107
Capital - Services Insourcing						
7 Consulting		21,496	261	2,191	15,045	4,000
8 Internal Labour		1,193	-	605	588	-
9 Facilities		487	-	-	487	-
10 Expenses		1,988	-	499	1,488	-
11 Software		17,955	75	348	17,532	-
12 Hardware	-	1,187	-	318	779	90
13 Subtotal		44,306	336	3,961	35,919	4,090
Total Plant Additions						
14 CIS		64,171	1,509	25,436	31,119	6,107
15 Service Insourcing		44,306	336	3,961	35,919	4,090
16 Subtotal	x-ref S6, line 6	108,477	1,845	29,397	67,038	10,197
17 AFUDC		3,538	-	899	2,639	-
18 Total Plant Additions	x-ref S3b, (2010 column, lines 25 + 237 + 449) + lines 37 + 249 + 461	112,016	1,845	30,296	69,677	10,197
Deferred O&M						
19 Internal Labour		9,210	-	77	9,133	-
20 Expenses	_	867			867	-
21 Subtotal	x-ref S3b, lines 203 + 415 + 627	10,077		77	10,001	-
22 AFUDC	x-ref S3b, lines 207 + 419 + 631	2	2			
23 Total Deferred O&M	-	10,079	2	77	10,001	•
24 Total		122,095	1,847	30,373	79,678	10,197

	BCUC Component	Resource	Total	2009	2010	<u>2011</u>	2012
Capital	CIS Software Acquisition	Consulting	431	431	-	-	-
		Software	5,645	-	4,738	908	-
	Subtotal		6,076	431	4,738	908	-
	CIS Implementation	Consulting	42,496	431	14,227	22,789	5,049
		Software	178	-	148	30	-
		Hardware	996	-	731	265	-
		Internal Labour	6,909	-	2,692	3,571	646
		Expenses	7,607	163	3,349	3,683	412
	Subtotal		58,185	594	21,146	30,338	6,107
	Call Centre Implementation	Consulting	14,740	503	2,192	10,045	2,000
		Facilities Improvements	15,014	60	317	14,637	-
		Software	1,193	-	605	588	-
		Hardware	487	-	-	487	-
		Internal Labour	984	-	46	939	-
		Expenses	823	-	220	540	62
	Subtotal		33,241	563	3,380	27,236	2,062
	Billing Operations Implementation	Consulting	7,244	242	2	5,000	2,000
		Facilities Improvements	2,942	15	32	2,894	-
		Internal Labour	426	-	3	423	-
		Expenses	364		98	239	28
	Subtotal		10,975	257	134	8,556	2,028
Capital Total			108,477	1,845	29,397	67,038	10,197
Deferred O&M	CIS Implementation	Internal Labour	<u> </u>		-	<u> </u>	-
	Subtotal		-		-	-	-
	Call Centre Implementation	Internal Labour	6,279	-	53	6,226	-
		Expenses	867	<u> </u>	-	867	-
	Subtotal		7,146	-	53	7,093	-
	Billing Operations Implementation	Internal Labour	2,931	<u> </u>	23	2,907	-
	Subtotal		2,931	-	23	2,907	-
Deferred O&M Total			10,077		77	10,001	
AFUDC			3,540	2	899	2,639	-
Grand Total			122,095	1,847	30,373	79,678	10,197

Financial Schedule 2 Customer Care Enhancement Project Estimated Customer Care O&M Costs in \$000s, Except Cost /Customer Amounts

		r																					
	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1 Labour				20,179	20,230	21,101	22,012	22,964	23,500	24,049	24,611	25,187	25,777	26,381	27,000	27,634	28,284	28,949	29,631	30,329	31,045	31,778	32,530
2 Outsourced Services				20,309	21,480	22,069	22,669	23,287	23,921	24,351	25,386	25,987	26,464	27,241	28,021	28,799	29,622	30,748	31,447	32,380	33,319	34,285	35,243
3 Technology Support				1,479	1,464	1,448	1,433	1,418	1,402	1,407	1,412	1,417	1,422	1,427	1,432	1,438	1,443	1,448	1,454	1,459	1,465	1,470	1,476
4 Facilities Support				3,189	3,253	3,318	3,384	3,452	3,521	3,591	3,663	3,736	3,811	3,887	3,965	4,044	4,125	4,208	4,292	4,378	4,465	4,554	4,646
5 Expenses				970	998	1,018	1,038	1,059	1,080	1,102	1,124	1,146	1,169	1,193	1,217	1,241	1,266	1,291	1,317	1,343	1,370	1,397	1,425
6 Total	x-ref S5, lines 4, 36 & 71			46,126	47,424	48,954	50,537	52,180	53,424	54,500	56,196	57,473	58,643	60,128	61,635	63,156	64,739	66,644	68,140	69,890	71,664	73,486	75,320
	x-ref S7																						
7 Ave Customers				959,757	968,338	977,113	986,272	995,548	1,004,941	1,014,455	1,024,090	1,033,849	1,043,735	1,053,749	1,063,895	1,074,174	1,084,589	1,095,142	1,105,836	1,116,674	1,127,658	1,138,791	1,150,075
8 Cost /Customer				48.06	48.97	50.10	51.24	52.41	53.16	53.72	54.87	55.59	56.19	57.06	57.93	58.79	59.69	60.85	61.62	62.59	63.55	64.53	65.49

		-																						
		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
	TGI	-																						
1	1 Opening Gas Plant In Service	S3b, line 87	-	-	36,120	90,373	87,667	84,997	82,563	79,355	75,923	73,477	72,533	18,097	16,808	14,221	11,611	9,029	6,371	5,286	5,337	2,598	(170)	(2,920)
2	2 Additions	S3b, line 100	-	36,120	54,253	(2,706)	(2,670)	(2,435)	(1,216)	(2,477)	(2,446)	1,034	(2,543)	(1,289)	(2,587)	(2,610)	(2,582)	(2,658)	(1,085)	446	(2,739)	(2,769)	(2,750)	(1,640)
3	3 Retirements	S3b, line 113	-	-	-	-	-	-	(1,992)	(955)	-	(1,978)	(51,894)	-	-	-	-	-	-	(395)	-	-	-	-
4	4 Closing Gas Plant In Service	S3b, line 126	-	36,120	90,373	87,667	84,997	82,563	79,355	75,923	73,477	72,533	18,097	16,808	14,221	11,611	9,029	6,371	5,286	5,337	2,598	(170)	(2,920)	(4,560)
5	5																							
e	6 Opening Accumulated Depreciation	S3b, line 139	-	-	-	(3,947)	(14,748)	(25,211)	(35,339)	(43,172)	(51,583)	(60,449)	(67,031)	(23,580)	(25,218)	(26,786)	(28,031)	(28,950)	(29,546)	(29,810)	(29,634)	(29,860)	(29,743)	(29,280)
7	7 Depreciation	S3b, line 165	-	-	(3,947)	(10,801)	(10,462)	(10,129)	(9,824)	(9,367)	(8,866)	(8,560)	(8,442)	(1,638)	(1,569)	(1,245)	(919)	(596)	(264)	(219)	(225)	117	463	807
8	8 Retirements	S3b, line 152	-	-	-	-	-	-	1,992	955	-	1,978	51,894	-	-	-	-	-	-	395	-	-	-	-
ę	9 Closing Accumulated Depreciation	S3b, line 178	-	-	(3,947)	(14,748)	(25,211)	(35,339)	(43,172)	(51,583)	(60,449)	(67,031)	(23,580)	(25,218)	(26,786)	(28,031)	(28,950)	(29,546)	(29,810)	(29,634)	(29,860)	(29,743)	(29,280)	(28,473)
10	0																							
11	1 Opening Contributions in Aid of Construction	S3b, line 190	-	-	(3,142)	(12,048)	(18,030)	(18,099)	(18,172)	(18,243)	(18,304)	(18,369)	(15,355)	(6,553)	(630)	(617)	(592)	(574)	(563)	(589)	(572)	(514)	(493)	(479)
12	2 Additions	S3b, line 191	-	(3,142)	(8,905)	(5,982)	(69)	(73)	(70)	(61)	(65)	(128)	(104)	(59)	(56)	(48)	(53)	(51)	(91)	(111)	(46)	(38)	(42)	(41)
13	3 Retirements	S3b, line 192	-	-	-	-	-	-	-	-	-	3,142	8,905	5,982	69	73	70	61	65	128	104	59	56	48
14	4 Closing Contributions in Aid of Construction	S3b, line 193	-	(3,142)	(12,048)	(18,030)	(18,099)	(18,172)	(18,243)	(18,304)	(18,369)	(15,355)	(6,553)	(630)	(617)	(592)	(574)	(563)	(589)	(572)	(514)	(493)	(479)	(472)
15	5																							
16	6 Opening Amortization of Contributions in Aid of Construction	S3b, line 195	-	-	-	393	1,899	4,152	6,415	8,686	10,967	13,255	12,408	5,423	259	269	273	277	287	292	238	205	211	216
17	7 Amortization	S3b, line 196	-	-	-	-	· -	· -		· -		(3,142)	(8,905)	(5,982)	(69)	(73)	(70)	(61)	(65)	(128)	(104)	(59)	(56)	(48)
18	8 Retirements	S3b, line 197	-	-	393	1,506	2,254	2,262	2,272	2,280	2,288	2,296	1,919	819	79	77	74	72	70	74	72	64	62	60
19	9 Closing Amortization of Contributions in Aid of Construction	S3b, line 198	-	-	393	1,899	4,152	6,415	8,686	10,967	13,255	12,408	5,423	259	269	273	277	287	292	238	205	211	216	228
20	0																							
21	1 Opening Net Plant In Service		-	-	32.978	74.771	56,788	45.840	35.466	26.627	17.003	7.914	2.555	(6.614)	(8,780)	(12.913)	(16,739)	(20.218)	(23.451)	(24.821)	(24.632)	(27.570)	(30,195)	(32,462)
22	2 Closing Net Plant In Service		-	32,978	74,771	56,788	45,840	35,466	26,627	17.003	7.914	2,555	(6.614)	(8,780)	(12,913)	(16,739)	(20,218)	(23,451)	(24.821)	(24.632)	(27.570)	(30,195)	(32,462)	(33,277)
23	3	-			1								1.1.1		V ()	(X /- /	() /	1 1 1	(11)		
24	4 Mid Year Net Plant in Service	(line 21 + line 22)/2	-	16.489	53.875	65.779	51.314	40.653	31.046	21.815	12,458	5.234	(2.029)	(7.697)	(10.847)	(14.826)	(18,479)	(21.835)	(24.136)	(24,726)	(26,101)	(28.882)	(31.329)	(32.870)
25	5	(· · · /											() /	())	(()/	(- / - /	(,,	(, ,	() -/	(-, - ,	(.,,	((- //
26	6 Opening Deferred Charges	S3b, line 202	-	51	6.879	6.019	5,159	4.299	3.440	2.580	1.720	860	-	-	-	-	-	-	-	-	-	-	-	-
27	7 Additions	S3b, line 205	51	6.828	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
28	8 Amortization	S3b, line 206	-	-	(860)	(860)	(860)	(860)	(860)	(860)	(860)	(860)	-	-	-	-	-	-	-	-	-	-	-	-
29	9 Closing Deferred Charges	S3b, line 208	51	6.879	6.019	5,159	4,299	3,440	2.580	1,720	860	-	-	-	-	-	-	-	-	-	-	-	-	
30	0			- /		.,	,		,	, -														
31	1 Mid Year Deferred Charges		-		6.449	5.589	4.729	3.870	3.010	2,150	1.290	430	-	-	-	-	-		-	-		-		
32	2 Capital Lease Rate Base	S3b. line 209	-	14.936	13.339	11.748	10,163	8,583	7.009	5,440	3.878	2.322	772	14.644	13.074	11.511	9,954	8.404	6.860	5.323	3,793	2.270	755	
33	3 13 Month Adjustment (row 211, S3b)	S3b, line 211	-	-	(5,907)			.,	-					-	-	-	-	-		-			-	
34	4				(,)																			
35	5 TGI Rate Base	x-ref S3b, line 212	-	31.425	67.756	83.117	66.206	53,106	41.065	29.405	17.626	7.986	(1.257)	6.947	2.228	(3.315)	(8.525)	(13.431)	(17.276)	(19,403)	(22.308)	(26.612)	(30,574)	(32.870)
		1 -											/				/	/				/	/	

Customer Care Enhancement Project

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGVI																							
36 Opening Gas Plant In Service	S3b. line 299	-	-	4.282	10.729	10.396	10.062	9.753	9.359	8.920	8.593	4,765	(1.437)	(1.446)	(1.483)	(1.555)	(1.621)	(1.697)	(1.709)	(1.780)	(1.864)	(1.958)	(2.040)
37 Additions	S3b, line 312	-	4.282	6.447	(333)	(334)	(310)	(157)	(326)	(328)	141	(352)	(182)	(371)	(381)	(384)	(402)	(167)	70	(436)	(449)	(453)	(275)
38 Retirements	S3b, line 325	-	· · -	-	-	-	-	(237)	(113)	-	(3,968)	(5,850)	173	334	310	317	326	155	(141)	352	354	371	195
39 Closing Gas Plant In Service	S3b, line 338	-	4,282	10,729	10,396	10,062	9,753	9,359	8,920	8,593	4,765	(1,437)	(1,446)	(1,483)	(1,555)	(1,621)	(1,697)	(1,709)	(1,780)	(1,864)	(1,958)	(2,040)	(2,120)
40																							
41 Opening Accumulated Depreciation	S3b, line 351	-	-	-	(468)	(1,750)	(2,991)	(4,190)	(5,113)	(6,106)	(7,147)	(4,180)	1,072	1,076	919	792	666	539	593	943	809	683	553
42 Depreciation	S3b, line 377	-	-	(468)	(1,282)	(1,241)	(1,199)	(1,160)	(1,105)	(1,042)	(1,001)	(598)	177	177	182	191	199	209	209	218	229	240	251
43 Retirements	S3b, line 364	-	-	-	-	-	-	237	113	-	3,968	5,850	(173)	(334)	(310)	(317)	(326)	(155)	141	(352)	(354)	(371)	(195)
44 Closing Accumulated Depreciation 45	S3b, line 390	-	-	(468)	(1,750)	(2,991)	(4,190)	(5,113)	(6,106)	(7,147)	(4,180)	1,072	1,076	919	792	666	539	593	943	809	683	553	608
46 Opening Contributions in Aid of Construction	S3b, line 402	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 Additions	S3b, line 403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48 Retirements	S3b, line 404	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
49 Closing Contributions in Aid of Construction	S3b, line 405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50																							
51 Opening Amortization of Contributions in Aid of Construction	S3b, line 407	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
52 Amortization	S3b, line 408	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 Retirements	S3b, line 409	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 Closing Amortization of Contributions in Aid of Construction	S3b, line 410	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-	-
55																							
56 Opening Net Plant In Service		-	-	4,282	10,261	8,646	7,072	5,563	4,246	2,815	1,445	585	(365)	(370)	(564)	(763)	(955)	(1,158)	(1,116)	(837)	(1,054)	(1,274)	(1,487)
57 Closing Net Plant In Service		-	4,282	10,261	8,646	7,072	5,563	4,246	2,815	1,445	585	(365)	(370)	(564)	(763)	(955)	(1,158)	(1,116)	(837)	(1,054)	(1,274)	(1,487)	(1,512)
58																							
59 Mid Year Net Plant in Service	(line 21 + line 22)/2	-	2,141	7,272	9,454	7,859	6,317	4,904	3,530	2,130	1,015	110	(368)	(467)	(663)	(859)	(1,056)	(1,137)	(976)	(946)	(1,164)	(1,381)	(1,499)
60																							
61 Opening Deferred Charges	S3b, line 414	-	6	821	718	616	513	410	308	205	103	-	-	-	-	-	-	-	-	-	-	-	-
62 Additions	S3b, line 417	6	815	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
63 Amortization	S3b, line 418	-	-	(103)	(103)	(103)	(103)	(103)	(103)	(103)	(103)	-	-	-	-	-	-	-	-	-	-	-	-
64 Closing Deferred Charges	S3b, line 420	6	821	718	616	513	410	308	205	103	-	-	-	-	-	-	-	-	-	-	-	-	-
65																							
66 Mid Year Deferred Charges		-	-	770	667	564	462	359	257	154	51	-					-		-		-	-	-
67 Capital Lease Rate Base	S3b, line 421	-	1,775	1,613	1,445	1,271	1,091	907	716	519	316	107	2,066	1,876	1,681	1,479	1,270	1,055	833	604	368	124	-
68 13 Month Adjustment	S3b, line 423	-	-	(702)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 70 TGVI Rate Base	x-ref S3b, line 424		3,917	8,952	11,566	9,695	7,870	6,170	4,503	2,803	1,383	217	1,698	1,410	1,018	620	214	(82)	(143)	(342)	(797)	(1,256)	(1,499)
		-																(. /			/	/	

Customer Care Enhancement Project

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGW	P																						
71 Opening Gas Plant In Service	S3b, line 511	-	-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)
72 Additions	S3b, line 524	-	108	163	(8)	(8)	(7)	(4)	(8)	(8)	3	(8)	(4)	(8)	(8)	(8)	(9)	(4)	<u>`</u> 1	(9)	(9)	(9)	(5)
73 Retirements	S3b, line 537	-	-	-	-	-	-	(6)	(3)	-	(100)	(148)	4	8	7	7	8	4	(3)	8	8	8	4
74 Closing Gas Plant In Service	S3b, line 550	-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)	(41)
75																							
76 Opening Accumulated Depreciation	S3b, line 563	-	-	-	(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10
77 Depreciation	S3b, line 589	-	-	(12)	(32)	(31)	(30)	(29)	(28)	(27)	(26)	(15)	4	4	4	4	4	4	4	5	5	5	5
78 Retirements	S3b, line 576	-	-	-	-	-	-	6	3	-	100	148	(4)	(8)	(7)	(7)	(8)	(4)	3	(8)	(8)	(8)	(4)
79 Closing Accumulated Depreciation	S3b, line 602	-	-	(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10	11
80																							
81 Opening Contributions in Aid of Construction	S3b, line 614	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82 Additions	S3b, line 615	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 Retirements	S3b, line 616	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
84 Closing Contributions in Aid of Construction	S3b, line 617	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85																							
86 Opening Amortization of Contributions in Aid of Construction	S3b, line 619	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87 Amortization	S3b, line 620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88 Retirements	S3b, line 621	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
89 Closing Amortization of Contributions in Aid of Construction	S3b, line 622	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90																							
91 Opening Net Plant In Service		-	-	108	259	219	179	141	108	73	38	16	(7)	(7)	(11)	(15)	(19)	(24)	(23)	(17)	(21)	(26)	(30)
92 Closing Net Plant In Service		-	108	259	219	179	141	108	73	38	16	(7)	(7)	(11)	(15)	(19)	(24)	(23)	(17)	(21)	(26)	(30)	(30)
93																							
94 Mid Year Net Plant in Service	(line 21 + line 22)/2	-	54	184	239	199	160	125	90	56	27	4	(7)	(9)	(13)	(17)	(22)	(23)	(20)	(19)	(24)	(28)	(30)
95																							
96 Opening Deferred Charges	S3b, line 626	-	0	21	18	16	13	10	8	5	3	-	-	-	-	-	-	-	-	-	-	-	-
97 Additions	S3b, line 629	0	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98 Amortization	S3b, line 630	-	-	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	-	-	-	-	-	-	-	-	-	-	-	-
99 Closing Deferred Charges	S3b, line 632	0	21	18	16	13	10	8	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-
100																							
101 Mid Year Deferred Charges		-	-	19	17	14	12	9	6	4	1	-	-	-	-	-	-	-	-	-	-	-	-
102 Capital Lease Rate Base	S3b, line 633	-	45	40	35	31	26	21	17	12	7	2	46	41	37	32	27	22	17	12	7	2	-
103 13 Month Adjustment	S3b, line 635	-	-	(18)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104	_																						
105 TGW Rate Base	x-ref S3b, line 636	-	99	225	291	244	198	155	114	71	36	7	39	32	23	14	5	(1)	(3)	(7)	(16)	(25)	(30)

Financial Schedule 3b

Customer Care Enhancement Project

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGI																							
1 Capital Spending 2 Hardware 3 Software		653 4,902	2,228 1,361	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4 Land		-	652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5 Buildings		472	5,244		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Installer Fees		1,146	20,500	3,392 4,904			-	-		-	-	-		-					-		-	-	
8 Internal Labour		2,447	4,397	575	-	-	-	-	-	-	-	-	-	-	-		-		-	-	-	-	
9 Internal Materials		873	408	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
10 Training 11 Incremental Q&M		319	571	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 Total Spend	x-ref S6, line 31	25,554	53,942	9,073	-	-	-	-	-	-		-	-	-	-	-	-	-		-	-		
13 14 Opening WIP 15 Hardware			671	955	-		-			-	-		-	-	-							-	
16 Software		-	5,038	5,620	-		-	-		-	-		-	-	-			-	-	-	-	-	
17 Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 Buildings 19 Vendor Fees		1 349	554 16 574	28 571			-	-		-				-					-				
20 Installer Fees			1,177	7,083	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21 Internal Labour			2,515	5,553	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 Internal Materials 23 Training		146	1,050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
24 Incremental O&M		-			-	-	-	-	-	-	-	-	-	-	-				-	-		-	
25 Total Opening WIP	x-ref S1, line 18 &	1,560	27,907	47,782	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26 Additions 27 Hardware	x-ref S6, line 31	671	2 277	-	-	-	-			-		-	-			-							
28 Software		5,038	1,661	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29 Land		-	652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30 Buildings		489	5,244		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32 Installer Fees		1,177	18,759	4,904		-		-			-			-								-	
33 Internal Labour		2,515	4,629	575	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34 Internal Materials		905	408	167	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35 Training 36 Incremental Q&M		328	5/1	- 35		-		-			-			-	-								
37 Total Additions	x-ref S1, line 18	26,347	55,995	9,073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38 In-service			(4.000)	(055)																			
40 Software		-	(1,992)	(955)	-	-	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-
41 Land		-	(652)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 Buildings		-	(5,798)	(24.064)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43 Vendol Pees 44 Installer Fees		-	(12.853)	(11,964)		-		-	-		-			-	-		-						
45 Internal Labour		-	(1,591)	(6,127)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
46 Internal Materials		-	(1,458)	(167)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
47 Training 48 Incremental O&M		-	(699)	(35)		-		-	-		-			-	-		-						
49 Total In-service		-	(36,120)	(56,855)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
50 Closing WIP		671	055																				
52 Software		5,038	5,620	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
53 Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
54 Buildings 55 Vendor Fees		554 16 574	28 571	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
56 Installer Fees		1,177	7,083		-	-		-	-		-	-	-	-	-		-			-	-		
57 Internal Labour		2,515	5,553		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
58 Internal Materials		1,050	-	•	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
60 Incremental O&M		- 520				-		-			-	-		-	-								
61 TGI Total Closing WIP		27,907	47,782	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-
63 Recurring Plant Additions																							
64 Hardware		-	-	-	-	-	-	1,236	-	-	-	-	1,224	-	-	-	-	1,210	-	-	-	-	1,196
65 Software		-	-	-	-	-	53	-	-	53	395	-	52	-	-	52	-	389	52	-	-	51	-
67 Buildings		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	
68 Vendor Fees		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 Installer Fees		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70 Internal Labour 71 Internal Materials				-		-	-			-	3,160				-	-			3.104				
72 Training		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-
73 Capitalized Overhead			-	(2,602)	(2,706)	(2,670)	(2,488)	(2,452)	(2,477)	(2,498)	(2,521)	(2,543)	(2,565)	(2,587)	(2,610)	(2,634)	(2,658)	(2,684)	(2,710)	(2,739)	(2,769)	(2,801)	(2,836)
75		-	-	(2,002)	(2,100)	(2,070)	(2,400)	(1,210)	(2,477)	(2,440)	1,034	(2,043)	(1,203)	(2,007)	(2,010)	(2,002)	(2,030)	(1,005)	440	(2,139)	(2,709)	(2,730)	(1,040)

	Poforonco	2010	2011	2012	2012	2014	2015	2016	2017	2019	2010	2020	2021	2022	2022	2024	2025	2026	2027	2029	2020	2020	2021
76 Opening Plant Balance	Relefence	2010	2011	2012	2013	2014	2015	2016	2017	2010	2019	2020	2021	2022	2023	2024	2025	2020	2027	2020	2029	2030	2031
70 Opening Flant Balance		_		1 992	2 9/18	2 9/18	2 9/18	2 9/18	2 1 9 2	1 236	1 236	1 236	1 236	2 460	2 460	2 460	2 460	2 460	3 670	3 670	3 670	3 670	3 670
78 Software				1.079	6,699	6 699	6 699	6 752	6 752	6 752	6.805	6 120	501	553	553	553	605	605	994	1 046	1 046	1 046	1 097
79 Land				652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652
80 Buildings		_		5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798	5 798
81 Vendor Fees				9 798	41 761	41 761	41 761	41 761	41 761	41 761	41 761	41 761	10.043	10.043	10 043	10 043	10 043	10.043	10.043	10.043	10 043	10 043	10 043
82 Installer Fees		-	-	12.853	24.840	24.840	24.840	24.840	24.840	24.840	24.840	24.840	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412
83 Internal Labour		-	-	1.591	7,718	7,718	7,718	7,718	7,718	7,718	7,718	7,718	1.591	1.591	1,591	1,591	1,591	1.591	1.591	1,196	1,196	1,196	1,196
84 Internal Materials		-	-	1.458	1.626	1.626	1.626	1.626	1.626	1.626	1.626	4,785	4,785	4,785	4,785	4,785	4,785	4,785	4,785	7.889	7.889	7.889	7.889
85 Training		-	-	899	934	934	934	934	934	934	934	35	35	35	35	35	35	35	35	35	35	35	35
86 Incremental O&M and Capitalized Overhead		-	-		(2.602)	(5.308)	(7.978)	(10.466)	(12,918)	(15.394)	(17,893)	(20.413)	(22,956)	(25.520)	(28,108)	(30,718)	(33.351)	(36.009)	(38,693)	(41.403)	(44.142)	(46.911)	(49,712)
87 Total Opening Plant Balance	x-ref S3a, line 1	-	-	36.120	90.373	87.667	84,997	82,563	79.355	75,923	73.477	72.533	18.097	16,808	14,221	11.611	9.029	6.371	5,286	5.337	2,598	(170)	(2.920)
88							,	,	,	,		,		,	,== .	,	-,	-,	-,	0,000	_,	((_,===)
89 Additions																							
90 Hardware		-	1.992	955	-	-	-	1.236	-	-	-	-	1.224	-	-	-	-	1.210	-	-	-	-	1.196
91 Software		-	1.079	5.620	-	-	53		-	53	395	-	52	-	-	52	-	389	52	-	-	51	
92 Land		-	652	-	-	-		-	-	-		-		-	-		-			-	-	-	-
93 Buildings		-	5,798	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94 Vendor Fees		-	9,798	31.964	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95 Installer Fees		-	12,853	11.987	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96 Internal Labour		-	1.591	6.127	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97 Internal Materials		-	1.458	167	-	-	-	-	-	-	3.160	-	-	-	-	-	-	-	3.104	-	-	-	-
98 Training		-	899	35	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	
99 Incremental O&M and Capitalized Overhead		-	-	(2.602)	(2.706)	(2.670)	(2.488)	(2.452)	(2.477)	(2.498)	(2.521)	(2.543)	(2.565)	(2.587)	(2.610)	(2.634)	(2.658)	(2.684)	(2.710)	(2.739)	(2.769)	(2.801)	(2.836)
100 Total Additions	x-ref S3a, line 2	-	36,120	54,253	(2,706)	(2.670)	(2.435)	(1,216)	(2.477)	(2,446)	1.034	(2,543)	(1,289)	(2.587)	(2.610)	(2,582)	(2.658)	(1.085)	446	(2,739)	(2,769)	(2,750)	(1.640)
101					(, ,	() /	(,)	(, - ,	,	() -)		() /	() /	() /	(//	())	()/	())		())	())	())	() /
102 Retirements																							
103 Hardware		-		-	-	-	-	(1,992)	(955)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
104 Software		-		-	-	-	-	-	-	-	(1,079)	(5,620)	-	-	-	-	-	-	-	-	-	-	-
105 Land		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
106 Buildings		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107 Vendor Fees		-	-	-	-	-	-	-	-	-	-	(31,719)	-	-	-	-	-	-	-	-	-	-	-
108 Installer Fees		-		-	-	-	-	-	-	-	-	(8,428)	-	-	-	-	-	-	-	-	-	-	-
109 Internal Labour		-		-	-	-	-	-	-	-	-	(6,127)	-	-	-	-	-	-	(395)	-	-	-	-
110 Internal Materials		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
111 Training		-	-	-	-	-	-	-	-	-	(899)	-	-	-	-	-	-	-	-	-	-	-	-
112 Incremental O&M and Capitalized Overhead		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
113 Total Retirements	x-ref S3a, line 3	-	-	-	-	-	-	(1,992)	(955)	-	(1,978)	(51,894)	-	-	-	-	-	-	(395)	-	-	-	-
114																							
115 Closing Plant Balance																							
116 Hardware		-	1,992	2,948	2,948	2,948	2,948	2,192	1,236	1,236	1,236	1,236	2,460	2,460	2,460	2,460	2,460	3,670	3,670	3,670	3,670	3,670	4,865
117 Software		-	1,079	6,699	6,699	6,699	6,752	6,752	6,752	6,805	6,120	501	553	553	553	605	605	994	1,046	1,046	1,046	1,097	1,097
118 Land		-	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652	652
119 Buildings		-	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798	5,798
120 Vendor Fees		-	9,798	41,761	41,761	41,761	41,761	41,761	41,761	41,761	41,761	10,043	10,043	10,043	10,043	10,043	10,043	10,043	10,043	10,043	10,043	10,043	10,043
121 Installer Fees		-	12,853	24,840	24,840	24,840	24,840	24,840	24,840	24,840	24,840	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412	16,412
122 Internal Labour		-	1,591	7,718	7,718	7,718	7,718	7,718	7,718	7,718	7,718	1,591	1,591	1,591	1,591	1,591	1,591	1,591	1,196	1,196	1,196	1,196	1,196
123 Internal Materials		-	1,458	1,626	1,626	1,626	1,626	1,626	1,626	1,626	4,785	4,785	4,785	4,785	4,785	4,785	4,785	4,785	7,889	7,889	7,889	7,889	7,889
124 Training		-	899	934	934	934	934	934	934	934	35	35	35	35	35	35	35	35	35	35	35	35	35
125 Incremental O&M and Capitalized Overhead		-	-	(2,602)	(5,308)	(7,978)	(10,466)	(12,918)	(15,394)	(17,893)	(20,413)	(22,956)	(25,520)	(28,108)	(30,718)	(33,351)	(36,009)	(38,693)	(41,403)	(44,142)	(46,911)	(49,712)	(52,547)
126 Total Closing Plant Balance	x-ref S3a, line 4	-	36,120	90,373	87,667	84,997	82,563	79,355	75,923	73,477	72,533	18,097	16,808	14,221	11,611	9,029	6,371	5,286	5,337	2,598	(170)	(2,920)	(4,560)
127																						. ,	

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
128 0	Dpening Accumulated Depreciation	-	-																					
129	Hardware				-	(398)	(988)	(1,577)	(2,167)	(764)	(247)	(495)	(742)	(989)	(1,236)	(1,728)	(2,220)	(2,712)	(3,204)	(3,696)	(4,430)	(5,164)	(5,898)	(6,632)
130	Software				-	(135)	(972)	(1,810)	(2,647)	(3,491)	(4,335)	(5,179)	(4,950)	(96)	(158)	(228)	(297)	(366)	(441)	(517)	(641)	(772)	(903)	(1,034)
131	Land				-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
132	Buildings				-	(89)	(178)	(268)	(357)	(446)	(535)	(624)	(714)	(803)	(892)	(981)	(1,070)	(1,160)	(1,249)	(1,338)	(1,427)	(1,516)	(1,606)	(1,695)
133	Vendor Fees				-	(1,225)	(6,445)	(11,665)	(16,885)	(22,105)	(27,326)	(32,546)	(37,766)	(11,267)	(12,523)	(13,778)	(15,034)	(16,289)	(17,544)	(18,800)	(20,055)	(21,310)	(22,566)	(23,821)
134	Installer Fees				-	(1,607)	(4,712)	(7,817)	(10,922)	(14,027)	(17,132)	(20,237)	(23,342)	(18,019)	(20,070)	(22,122)	(24,173)	(26,225)	(28,276)	(30,328)	(32,379)	(34,431)	(36,482)	(38,534)
135	Internal Labour				-	(199)	(1,164)	(2,129)	(3,093)	(4,058)	(5,023)	(5,988)	(6,953)	(1,790)	(1,989)	(2,188)	(2,387)	(2,585)	(2,784)	(2,983)	(2,787)	(2,937)	(3,086)	(3,236)
130	Training				-	(102)	(365)	(369)	(792)	(995)	(1,196)	(1,401)	(1,605)	(2,203)	(2,001)	(3,399)	(3,997)	(4,595)	(5,194)	(5,792)	(6,390)	(7,376)	(0,302)	(9,340)
120	Interconduction of the second control and control of the second sec				-	(112)	(229)	(346)	(403)	2 204	(090)	6 922	0.070	(35)	(39)	(43)	(40)	(52)	20 202	22 704	29 541	(09)	40.224	(/0) 55.009
130	Total TGI Depreciation Expense	v-ref S3a line 6				(3.947)	(14 748)	(25 211)	(35,330)	(43 172)	(51 583)	(60,449)	(67.031)	(23 580)	(25 218)	(26,786)	(28.031)	(28.950)	(29,546)	(29.810)	(29,634)	(29,860)	(20 7/3)	(29 280)
140	Total TOT Depredation Expense	x-rei 058, inte 0				(0,047)	(14,740)	(20,211)	(00,000)	(40,172)	(01,000)	(00,443)	(07,001)	(20,000)	(20,210)	(20,700)	(20,001)	(20,000)	(23,340)	(20,010)	(23,004)	(23,000)	(23,743)	(23,200)
141 F	Retirements																							
142	Hardware				-	-	-	-	1.992	955	-	-	-	-	-	-	-	-	-	-	-	-	-	-
143	Software				-	-	-	-		-	-	1.079	5.620	-	-	-	-	-	-	-	-	-	-	-
144	Land					-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-		-
145	Buildings				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
146	Vendor Fees				-	-	-	-	-	-	-	-	31,719	-	-	-	-	-	-	-	-	-	-	-
147	Installer Fees				-	-	-	-	-	-	-	-	8,428	-	-	-	-	-	-	-	-	-	-	-
148	Internal Labour				-	-	-	-	-	-	-	-	6,127	-	-	-	-	-	-	395	-	-	-	-
149	Internal Materials				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
150	Training				-	-	-	-	-	-	-	899	-	-	-	-	-	-	-	-	-	-	-	-
151	Incremental O&M and Capitalized Overhead		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
152	Total Closing Accumulated Depreciation	x-ref S3a, line 8			-	-	-	-	1,992	955	-	1,978	51,894	-	-	-	-	-	-	395	-	-	-	-
153	Depresention Function																							
154 L	Hardwara				(209)	(500)	(500)	(500)	(500)	(420)	(247)	(247)	(247)	(247)	(402)	(402)	(402)	(402)	(402)	(724)	(724)	(724)	(724)	(724)
155	Software				(396)	(590)	(990)	(000)	(944)	(436)	(247)	(247)	(247)	(247)	(492)	(492)	(492)	(492)	(492)	(734)	(734)	(734)	(7.34)	(134)
157	Land				(133)	(037)	(037)	(037)	(044)	(044)	(044)	(031)	(703)	(03)	(03)	(03)	(03)	(70)	(70)	(124)	(131)	(131)	(131)	(137)
158	Buildings				(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(89)	(80)
159	Vendor Fees				(1 225)	(5 220)	(5 220)	(5 220)	(5 220)	(5 220)	(5 220)	(5 220)	(5 220)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)	(1 255)
160	Installer Fees				(1,607)	(3,105)	(3,105)	(3,105)	(3,105)	(3,105)	(3,105)	(3,105)	(3,105)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)	(2.052)
161	Internal Labour				(199)	(965)	(965)	(965)	(965)	(965)	(965)	(965)	(965)	(199)	(199)	(199)	(199)	(199)	(199)	(199)	(150)	(150)	(150)	(150)
162	Internal Materials				(182)	(203)	(203)	(203)	(203)	(203)	(203)	(203)	(598)	(598)	(598)	(598)	(598)	(598)	(598)	(598)	(986)	(986)	(986)	(986)
163	Training				(112)	(117)	(117)	(117)	(117)	(117)	(117)	(117)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
164	Incremental O&M and Capitalized Overhead				-	325	664	997	1,308	1,615	1,924	2,237	2,552	2,869	3,190	3,513	3,840	4,169	4,501	4,837	5,175	5,518	5,864	6,214
165	Total TGI Depreciation Expense	x-ref S3a, line 7			(3,947)	(10,801)	(10,462)	(10,129)	(9,824)	(9,367)	(8,866)	(8,560)	(8,442)	(1,638)	(1,569)	(1,245)	(919)	(596)	(264)	(219)	(225)	117	463	807
166																								
167 0	Closing Accumulated Depreciation																							
168	Hardware				(398)	(988)	(1,577)	(2,167)	(764)	(247)	(495)	(742)	(989)	(1,236)	(1,728)	(2,220)	(2,712)	(3,204)	(3,696)	(4,430)	(5,164)	(5,898)	(6,632)	(7,366)
169	Software				(135)	(972)	(1,810)	(2,647)	(3,491)	(4,335)	(5,179)	(4,950)	(96)	(158)	(228)	(297)	(366)	(441)	(517)	(641)	(772)	(903)	(1,034)	(1,171)
170	Land				-	-	-	-	-	-	-	-	-	-	-		-	-		-		-	-	-
171	Buildings				(89)	(178)	(268)	(357)	(446)	(535)	(624)	(714)	(803)	(892)	(981)	(1,070)	(1,160)	(1,249)	(1,338)	(1,427)	(1,516)	(1,606)	(1,695)	(1,784)
172	Vendor Fees				(1,225)	(6,445)	(11,665)	(16,885)	(22,105)	(27,326)	(32,546)	(37,766)	(11,267)	(12,523)	(13,778)	(15,034)	(16,289)	(17,544)	(18,800)	(20,055)	(21,310)	(22,566)	(23,821)	(25,076)
173	Installer Fees				(1,607)	(4,712)	(7,817)	(10,922)	(14,027)	(17,132)	(20,237)	(23,342)	(18,019)	(20,070)	(22,122)	(24,173)	(26,225)	(28,276)	(30,328)	(32,379)	(34,431)	(36,482)	(38,534)	(40,585)
174	Internal Labour				(199)	(1,164)	(2,129)	(3,093)	(4,058) (00E)	(5,023)	(5,988)	(0,953) (1,605)	(1,790)	(1,989)	(2,188)	(2,387)	(2,585) (4,505)	(2,784) (5.104)	(2,983) (5,702)	(2,787)	(2,937)	(3,086)	(3,236) (0,248)	(3,385)
176	Training				(102)	(305)	(346)	(463)	(550)	(1,150) (696)	(1,401) (813)	(1,003)	(2,203)	(2,001)	(3,353)	(3,357)	(4,050)	(56)	(5,752)	(0,350)	(0,070)	(0,302)	(3,340) (78)	(10,333)
177	Incremental O&M and Capitalized Overhead				(112)	(225)	(340)	1 986	3 204	(090)	6.833	9.070	11 621	14 491	17 681	21 104	25.034	29 203	33 704	38 541	43 716	19 234	55 098	61 312
178	Total Closing Accumulated Depreciation	x-ref S3a line 9			(3.947)	(14 748)	(25 211)	(35,339)	(43 172)	(51 583)	(60,449)	(67.031)	(23 580)	(25,218)	(26,786)	(28.031)	(28,950)	(29 546)	(29,810)	(29.634)	(29,860)	(29 743)	(29,280)	(28 473)
179	Total oformig / total matatod Doproviduon	x 101 000, into 0			(0,011)	(11,110)	(20,211)	(00,000)	(10,112)	(01,000)	(00,110)	(01,001)	(20,000)	(20,210)	(20,100)	(20,001)	(20,000)	(20,010)	(20,010)	(20,001)	(20,000)	(20,7 10)	(20,200)	(20,110)
180 0	Deening GPIS				36.120	90.373	87.667	84,997	82,563	79.355	75,923	73.477	72.533	18.097	16.808	14.221	11.611	9.029	6.371	5.286	5.337	2,598	(170)	(2.920)
181 0	Closing GPIS			- 36.120	90.373	87.667	84,997	82.563	79.355	75,923	73.477	72.533	18.097	16.808	14.221	11.611	9.029	6.371	5.286	5.337	2,598	(170)	(2,920)	(4,560)
182 M	Mid-Year GPIS		-	- 18,060	63,247	89,020	86,332	83,780	80,959	77,639	74,700	73,005	45,315	17,452	15,514	12,916	10,320	7,700	5,829	5,312	3,968	1,214	(1,545)	(3,740)
183																							()/	(-, -,
184 0	Dpening Accumulated Depreciation				-	(3,947)	(14,748)	(25,211)	(35,339)	(43,172)	(51,583)	(60,449)	(67,031)	(23,580)	(25,218)	(26,786)	(28,031)	(28,950)	(29,546)	(29,810)	(29,634)	(29,860)	(29,743)	(29,280)
185 0	Closing Accumulated Depreciation				(3,947)	(14,748)	(25,211)	(35,339)	(43,172)	(51,583)	(60,449)	(67,031)	(23,580)	(25,218)	(26,786)	(28,031)	(28,950)	(29,546)	(29,810)	(29,634)	(29,860)	(29,743)	(29,280)	(28,473)
186 M	Id-Year Accumulated Depreciation				(1,974)	(9,348)	(19,979)	(30,275)	(39,256)	(47,377)	(56,016)	(63,740)	(45,306)	(24,399)	(26,002)	(27,409)	(28,491)	(29,248)	(29,678)	(29,722)	(29,747)	(29,801)	(29,511)	(28,876)
187																								
188 1 189	GI Mid-Year Net Plant in Service			- 18,060	61,273	79,672	66,353	53,505	41,703	30,261	18,684	9,265	9	(6,947)	(10,488)	(14,493)	(18,171)	(21,548)	(23,850)	(24,411)	(25,779)	(28,587)	(31,056)	(32,616)

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
190	TGI Software CIAOC Opening Balance	x-ref S3a, line 11	-	-	(3,142)	(12,048)	(18,030)	(18,099)	(18,172)	(18,243)	(18,304)	(18,369)	(15,355)	(6,553)	(630)	(617)	(592)	(574)	(563)	(589)	(572)	(514)	(493)	(479)
191	TGI Software CIAOC Additions	x-ref S3a, line 12	-	(3,142)	(8,905)	(5,982)	(69)	(73)	(70)	(61)	(65)	(128)	(104)	(59)	(56)	(48)	(53)	(51)	(91)	(111)	(46)	(38)	(42)	(41)
192	TGI Software CIAOC Retirements	x-ref S3a, line 13	-	-	-	-	-	-	-	-	-	3,142	8,905	5,982	69	73	70	61	65	128	104	59	56	48
193	TGI Software CIAOC Closing Balance	x-ref S3a, line 14	-	(3,142)	(12,048)	(18,030)	(18,099)	(18,172)	(18,243)	(18,304)	(18,369)	(15,355)	(6,553)	(630)	(617)	(592)	(574)	(563)	(589)	(572)	(514)	(493)	(479)	(472)
194																								
195	TGI Software CIAOC Opening Balance Accumulated Depreciation	x-ref S3a, line 16	-	-	-	393	1,899	4,152	6,415	8,686	10,967	13,255	12,408	5,423	259	269	273	277	287	292	238	205	211	216
196	TGI Software CIAOC Retirements	x-ref S3a, line 17	-	-	-	-	-	-	-	-	-	(3,142)	(8,905)	(5,982)	(69)	(73)	(70)	(61)	(65)	(128)	(104)	(59)	(56)	(48)
197	TGI Amortization of Software CIAOC	x-ref S3a, line 18	-	-	393	1,506	2,254	2,262	2,272	2,280	2,288	2,296	1,919	819	79	77	74	72	70	74	72	64	62	60
198	TGI Software CIAOC Closing Balance Accumulated Depreciation	x-ref S3a, line 19	-	-	393	1,899	4,152	6,415	8,686	10,967	13,255	12,408	5,423	259	269	273	277	287	292	238	205	211	216	228
199																								
200	TGI Mid Year Software CIAOC		-	(1,571)	(7,399)	(13,893)	(15,039)	(12,852)	(10,657)	(8,447)	(6,226)	(4,031)	(2,039)	(750)	(359)	(333)	(308)	(287)	(286)	(316)	(322)	(295)	(272)	(253)
201																-								
202	TGI Opening Deferred Charges	x-ref S3a, line 26	-	51	6,879	6,019	5,159	4,299	3,440	2,580	1,720	860	0	0	0	0	0	0	0	0	0	0	0	0
203	TGI O&M Deferred Charge Additions	S1, line 21	68	8,914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
204	TGI O&M Tax on Deferred Charge Additions		(19)	(2,362)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
205	TGI O&M Net Deferred Charge Additions	x-ref S3a, line 27	49	6,552	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
206	TGI O&M Amortization Expense	x-ref S3a, line 28	-	-	(860)	(860)	(860)	(860)	(860)	(860)	(860)	(860)	-	-	-	-	-	-	-	-	-	-	-	-
207	I GI O&M Deterred Charge AFUDC	S1, line 22	2	276			-			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
208	I GI Closing Deterred Charges	x-ref S3a, line 29	51	6,879	6,019	5,159	4,299	3,440	2,580	1,720	860	0	0	0	0	0	0	0	0	0	0	0	0	0
209	Capital Lease Rate Base	x-ref S3a, line 32	-	14,936	13,339	11,748	10,163	8,583	7,009	5,440	3,878	2,322	772	14,644	13,074	11,511	9,954	8,404	6,860	5,323	3,793	2,270	755	-
210	I GI Mid-Year Deferred Charges		-	-	6,449	5,589	4,729	3,870	3,010	2,150	1,290	430	-	-	-	-	-	-	-	-	-	-	-	-
211	In-Service Adjustment	x-rer 53a, line 33	-	-	(5,907)	-	-	-	-	-	47.000	-	-		-	(0.045)	(0.505)	-	(17.070)	-	-	-	-	-
212	I GI Ratebase	x-rer 53a, line 35	-	31,425	67,756	83,117	00,206	53,106	41,065	29,405	17,626	7,986	(1,257)	o,947	2,228	(3,315)	(8,525)	(13,431)	(17,276)	(19,403)	(22,308)	(∠o,o12)	(30,574)	(32,870)

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGVI																							
213 Capital Spending																							
214 Hardware		76	265	-	-	-		-	-	-	-	-	-	-		-	-	-		-	-	-	
215 Software		573	162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
216 Land		-	77	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-	-
217 Buildings		55	623	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
218 Vendor Fees		1,723	2,445	410	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
219 Installet Les		286	523	69					-				-										
221 Internal Materials		102	48	20		_	_		-			-	-			-	_		-	-		_	
222 Training		37	68	4	-	-			-	-	-	-	-	-		-		-		-		-	
223 Incremental O&M		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
224 Total Spend	x-ref S6, line 48	2,986	6,412	1,097	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
225																							
226 Opening WIP			70	112																			
228 Software			590	663					-				-										
229 Land		-	-	-	-	-			-	-	-	-	-	-		-		-		-		-	
230 Buildings		8	65	-	-	-			-	-	-	-	-	-		-	-	-		-	-	-	
231 Vendor Fees		158	1,941	3,387	-	-		-	-	-	-	-	-	-		-	-	-		-	-	-	-
232 Installer Fees		-	138	843	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-
233 Internal Labour		-	295	659	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
234 Internal Materials 225 Training		17	123	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
235 Incremental O&M									-				-									-	
237 Total Opening WIP	x-ref S1, line 18 &	182	3,269	5,665	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
238 Additions	x-ref S6, line 48																						
239 Hardware		79	271	-	-	-	-	-	-	-	-	-	-	-		-	-	-		-	-	-	-
240 Software		590	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
241 Land 242 Buildings		57	622	-	-	-		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
242 Vendor Fees		1 784	2 604	410					-				-									-	
244 Installer Fees		138	2,233	593	-	-			-	-	-	-	-	-		-		-		-	-	-	
245 Internal Labour		295	553	69	-	-			-	-	-	-	-	-		-	-	-		-	-	-	
246 Internal Materials		106	48	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
247 Training		38	68	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
248 Incremental O&M 249 Total Additions	v-ref S1 line 18	3.087	6 678	1 097		-																<u> </u>	<u> </u>
250 In-service	x-ter off, line to	3,007	0,070	1,007																			
251 Hardware		-	(237)	(113)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
252 Software		-	(127)	(663)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
253 Land		-	(77)	-	-	-	-	-		-	-	-		-		-	-	-	-	-	-	-	-
254 Duiluliigs 255 Vendor Fees		-	(000)	(3 798)	-	-			-	-	-	-	-	-		-	-	-		-	-	-	
256 Installer Fees		-	(1,130)	(1,436)	_	-		-		-	_	-				-		-			-		
257 Internal Labour		-	(189)	(728)	-	-			-	-	-	-	-	-		-	-	-		-	-	-	
258 Internal Materials		-	(172)	(20)	-	-		-	-	-	-	-	-	-		-	-	-		-	-	-	-
259 Training		-	(106)	(4)	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
260 Incremental O&M		-	- (4 202)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
261 Foldi III-Service 262 Closing WIP		-	(4,202)	(0,702)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
263 Hardware		79	113	-	-	-		-		-	-	-			-	-	-	-			-		-
264 Software		590	663	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
265 Land			-	-	-	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-	-	-
266 Buildings		65	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
267 Vendor Fees		1,941	3,387	-	-	-		-		-	-	-					-	-					
269 Internal Labour		295	659						-				-										
270 Internal Materials		123		-	-	-			-	-	-	-	-	-		-		-		-		-	
271 Training		38	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-
272 Incremental O&M		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
273 TGVI Total Closing WIP		3,269	5,665	-	-	-	-	-		-	-	-		-	-	-	-	-	-	-	-	-	-
275 Recurring Plant Additions																							
276 Hardware		-	-				-	160	-	-	-		173	-	-	-	-	186		-	-	-	201
277 Software		-	-	-	-	-	7	-	-	7	54	-	7	-	-	8	-	60	8	-	-	8	
278 Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
279 Buildings		-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
280 Vendor Fees		-	-	-			-	-	-	-	-		-	-	-	-	-	-	-	-	-	-	-
281 Installer Fees		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
202 Internal Labour 283 Internal Materials		-	-				-	-	:		431		:		-			-	486				-
284 Training		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-		-	-	-	-
285 Capitalized Overhead		-	-	(315)	(333)	(334)	(316)	(317)	(326)	(335)	(343)	(352)	(362)	(371)	(381)	(391)	(402)	(413)	(424)	(436)	(449)	(462)	(476)
286 Total Recurring Plant Additions		-	-	(315)	(333)	(334)	(310)	(157)	(326)	(328)	141	(352)	(182)	(371)	(381)	(384)	(402)	(167)	70	(436)	(449)	(453)	(275)

287

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
288 0	Dpening Plant Balance																							
289	Hardware		-	-	237	350	350	350	350	273	160	160	160	160	173	173	173	173	173	186	186	186	186	186
290	Software		-	-	127	791	791	791	797	797	797	804	731	68	75	75	68	76	76	129	83	83	76	84
291	Land		-	-	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
292	Buildings		-	-	688	688	688	688	688	688	688	688	-	-	-	-	-	-	-	-	-	-	-	-
293	Vendor Fees		-	-	1,158	4,956	4,956	4,956	4,956	4,956	4,956	4,956	3,798	30	30	30	30	30	30	30	30	30	30	30
294	Installer Fees		-	-	1,528	2,964	2,964	2,964	2,964	2,964	2,964	2,964	1,436	430	430	430	430	430	430	430	430	430	430	430
295	Internal Labour		-	-	189	917	917	917	917	917	917	917	728	-	-	-	-	-	-	-	-	-	-	-
296	Internal Materials		-	-	172	192	192	192	192	192	192	192	451	451	451	451	451	451	451	451	506	506	506	506
297	Training		-	-	106	110	110	110	110	110	110	110	4	4	4	4	4	4	4	4	4	4	4	4
298	Incremental O&M and Capitalized Overhead		-	-	-	(315)	(647)	(981)	(1,298)	(1,615)	(1,941)	(2,275)	(2,619)	(2,657)	(2,686)	(2,723)	(2,788)	(2,862)	(2,938)	(3,016)	(3,097)	(3,180)	(3,267)	(3,357)
299	Total Opening Plant Balance	x-ref S3a, line 36	-	-	4,282	10,729	10,396	10,062	9,753	9,359	8,920	8,593	4,765	(1,437)	(1,446)	(1,483)	(1,555)	(1,621)	(1,697)	(1,709)	(1,780)	(1,864)	(1,958)	(2,040)
300																								
301 A	Additions																							
302	Hardware		-	237	113	-	-	-	160	-	-	-	-	173	-	-	-	-	186	-	-	-	-	201
303	Software		-	127	663	-	-	7	-	-	7	54	-	7	-	-	8	-	60	8	-	-	8	-
304	Land		-	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
305	Buildings		-	688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
306	Vendor Fees		-	1,158	3,798	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
307	Installer Fees		-	1,528	1,436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
308	Internal Labour		-	189	728	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
309	Internal Materials		-	172	20	-	-	-	-	-	-	431	-	-	-	-	-	-	-	486	-	-	-	-
310	Training		-	106	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
311	Incremental O&M and Capitalized Overhead		-	-	(315)	(333)	(334)	(316)	(317)	(326)	(335)	(343)	(352)	(362)	(371)	(381)	(391)	(402)	(413)	(424)	(436)	(449)	(462)	(476)
312	Total Additions	x-ref S3a, line 37	-	4,282	6,447	(333)	(334)	(310)	(157)	(326)	(328)	141	(352)	(182)	(371)	(381)	(384)	(402)	(167)	70	(436)	(449)	(453)	(275)
313																								
314 F	Retirements																							
315	Hardware		-	-	-	-	-	-	(237)	(113)	-	-	-	(160)	-	-	-	-	(173)	-	-	-	-	(186)
316	Software		-	-	-	-	-	-	-	· -	-	(127)	(663)	-	-	(7)	-	-	(7)	(54)	-	(7)	-	-
317	Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
318	Buildings		-	-	-	-	-	-	-	-	-	(688)	-	-	-	-	-	-	-	-	-	-	-	-
319	Vendor Fees		-	-	-	-	-	-	-	-	-	(1,158)	(3,768)	-	-	-	-	-	-	-	-	-	-	-
320	Installer Fees		-	-	-	-	-	-	-	-	-	(1,528)	(1,005)	-	-	-	-	-	-	-	-	-	-	-
321	Internal Labour		-	-	-	-	-	-	-	-	-	(189)	(728)	-	-	-	-	-	-	-	-	-	-	-
322	Internal Materials		-	-	-	-	-	-	-	-	-	(172)	-	-	-	-	-	-	-	(431)	-	-	-	-
323	Training		-	-	-	-	-	-	-	-	-	(106)	-	-	-	-	-	-	-	-	-	-	-	-
324	Incremental O&M and Capitalized Overhead		-	-	-	-	-	-	-	-	-	-	315	333	334	316	317	326	335	343	352	362	371	381
325	Total Retirements	x-ref S3a, line 38	-	-	-	-	-	-	(237)	(113)	-	(3,968)	(5,850)	173	334	310	317	326	155	(141)	352	354	371	195
326									. ,	. ,			,							. ,				
327 0	Closing Plant Balance																							
328	Hardware		-	237	350	350	350	350	273	160	160	160	160	173	173	173	173	173	186	186	186	186	186	201
329	Software		-	127	791	791	791	797	797	797	804	731	68	75	75	68	76	76	129	83	83	76	84	84
330	Land		-	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77	77
331	Buildings		-	688	688	688	688	688	688	688	688	-	-	-	-	-	-	-	-	-	-	-	-	-
332	Vendor Fees		-	1,158	4,956	4,956	4,956	4,956	4,956	4,956	4,956	3,798	30	30	30	30	30	30	30	30	30	30	30	30
333	Installer Fees		-	1,528	2,964	2,964	2,964	2,964	2,964	2,964	2,964	1,436	430	430	430	430	430	430	430	430	430	430	430	430
334	Internal Labour			189	917	917	917	917	917	917	917	728	-	-	-	-	-	-	-	-	-	-	-	
335	Internal Materials			172	192	192	192	192	192	192	192	451	451	451	451	451	451	451	451	506	506	506	506	506
336	Training			106	110	110	110	110	110	110	110	4	4	4	4	4	4	4	4	4	4	4	4	4
337	Incremental O&M and Capitalized Overhead			-	(315)	(647)	(981)	(1,298)	(1,615)	(1,941)	(2,275)	(2,619)	(2,657)	(2,686)	(2,723)	(2,788)	(2,862)	(2,938)	(3,016)	(3,097)	(3,180)	(3,267)	(3,357)	(3,452)
338	Total Closing Plant Balance	x-ref S3a, line 39	· · ·	4,282	10,729	10,396	10,062	9,753	9,359	8,920	8,593	4,765	(1,437)	(1,446)	(1,483)	(1,555)	(1,621)	(1,697)	(1,709)	(1,780)	(1,864)	(1,958)	(2,040)	(2,120)
339	-												/				,				,			

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
340	Opening Accumulated Depreciation																							
341	Hardware				-	(47)	(117)	(187)	(257)	(90)	(32)	(64)	(96)	(128)	-	(35)	(69)	(104)	(138)	-	(37)	(74)	(112)	(149)
342	Software				-	(16)	(115)	(214)	(312)	(412)	(512)	(611)	(585)	(13)	(21)	(31)	(33)	(42)	(51)	(54)	(16)	(26)	(29)	(39)
343	Land				-	-	-	-	-	-	-	-	-	-	-	-	-		-	-			-	-
344	Buildings				-	(11)	(21)	(32)	(42)	(53)	(64)	(74)	604	604	604	604	604	604	604	604	604	604	604	604
345	Vendor Fees				-	(145)	(764)	(1,384)	(2,003)	(2,623)	(3,242)	(3,861)	(3,323)	(30)	(33)	(37)	(41)	(44)	(48)	(52)	(55)	(59)	(63)	(67)
346	Installer Fees				-	(191)	(561)	(932)	(1,302)	(1,673)	(2,043)	(2,414)	(1,256)	(430)	(484)	(538)	(592)	(646)	(699)	(753)	(807)	(861)	(914)	(968)
347	Internal Labour				-	(24)	(138)	(253)	(307)	(482)	(597)	(711)	(037)	- (74)	(120)	(197)	(242)	(200)	(256)	(412)	(29)	(101)	(164)	(229)
340	Training				-	(21)	(45)	(69)	(93)	(117)	(141)	(165)	(10)	(74)	(130)	(107)	(243)	(299)	(356)	(412)	(36)	(101)	(164)	(220)
349	Intraminity				-	(13)	(27)	(41)	(55)	(09)	(02)	(90)	(4)	(4)	(5)	(5)	(0)	1 202	1 225	1 269	(0)	1 226	(9)	1 400
351	Total TGV/I Depreciation Expense	v-ref \$3a_line./1				(468)	(1 750)	(2 991)	(4 190)	(5 113)	(6 106)	(7 147)	(4.180)	1,147	1,140	010	702	1,203	539	503	943	809	683	553
352	Total TOVT Depreciation Expense	x-rei 00a, iirie 41				(400)	(1,750)	(2,551)	(4,150)	(3,113)	(0,100)	(1,141)	(4,100)	1,072	1,070	515	152	000	555	555	345	000	005	555
353	Retirements																							
354	Hardware				-	-	-	-	237	113	-	-	-	160	-	-	-	-	173		-	-	-	186
355	Software				-	-	-	-		-	-	127	663	-	-	7	-	-	7	54	-	7	-	-
356	Land				-	-		-	-	-	-	-	-	-	-	-	-	-	-		-	-		-
357	Buildings				-	-	-	-	-	-	-	688	-	-	-	-	-	-	-	-	-	-	-	-
358	Vendor Fees				-	-	-	-	-	-	-	1,158	3,768	-	-	-	-	-	-	-	-	-	-	-
359	Installer Fees				-		-	-	-	-	-	1,528	1,005	-	-	-	-	-	-	-	-	-	-	-
360	Internal Labour				-	-	-	-	-	-	-	189	728	-	-	-	-	-	-	-	-	-	-	-
361	Internal Materials				-	•	-	-	-	-	-	172	-	-	-	-	-	-	-	431	-	-	-	-
362	Training				-	-	-	-	-	-	-	106	-	-	-	-	-	-	-	-	-		-	-
363	Incremental O&M and Capitalized Overhead				-		-	-	-	-	-	-	(315)	(333)	(334)	(316)	(317)	(326)	(335)	(343)	(352)	(362)	(371)	(381)
364	rotal Closing Accumulated Depreciation	x-ret S3a, line 43			-	-	-	-	237	113	-	3,968	5,850	(173)	(334)	(310)	(317)	(326)	(155)	141	(352)	(354)	(371)	(195)
305	Depression Function																							
267	Lerdware				(47)	(70)	(70)	(70)	(70)	(55)	(22)	(22)	(22)	(22)	(25)	(25)	(25)	(25)	(25)	(27)	(27)	(27)	(27)	(27)
269	Software				(47)	(70)	(70)	(70)	(100)	(55)	(32)	(32)	(32)	(32)	(35)	(35)	(35)	(35)	(35)	(37)	(37)	(37)	(37)	(37)
260	Lond				(10)	(99)	(99)	(99)	(100)	(100)	(100)	(101)	(91)	(6)	(9)	(9)	(9)	(10)	(10)	(10)	(10)	(10)	(9)	(11)
370	Buildings				(11)	(11)	(11)	(11)	(11)	(11)	(11)	(11)												
371	Vendor Fees				(145)	(619)	(619)	(619)	(619)	(619)	(619)	(619)	(475)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)	(4)
372	Installer Fees				(143)	(370)	(370)	(370)	(370)	(370)	(370)	(370)	(179)	(54)	(54)	(54)	(54)	(54)	(54)	(54)	(54)	(54)	(54)	(54)
373	Internal Labour				(24)	(115)	(115)	(115)	(115)	(115)	(115)	(115)	(91)	(34)	(04)	(04)	(04)	(04)	(34)	(04)	(04)	(34)	(04)	(04)
374	Internal Materials				(21)	(24)	(24)	(24)	(24)	(24)	(24)	(24)	(56)	(56)	(56)	(56)	(56)	(56)	(56)	(56)	(63)	(63)	(63)	(63)
375	Training				(13)	(14)	(14)	(14)	(14)	(14)	(14)	(14)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
376	Incremental O&M and Capitalized Overhead				-	39	81	123	162	202	243	284	327	332	336	340	348	358	367	377	387	398	408	420
377	Total TGVI Depreciation Expense	x-ref S3a, line 42			(468)	(1,282)	(1,241)	(1,199)	(1,160)	(1,105)	(1,042)	(1,001)	(598)	177	177	182	191	199	209	209	218	229	240	251
378					,		,						,											
379	Closing Accumulated Depreciation																							
380	Hardware				(47)	(117)	(187)	(257)	(90)	(32)	(64)	(96)	(128)	-	(35)	(69)	(104)	(138)	-	(37)	(74)	(112)	(149)	-
381	Software				(16)	(115)	(214)	(312)	(412)	(512)	(611)	(585)	(13)	(21)	(31)	(33)	(42)	(51)	(54)	(16)	(26)	(29)	(39)	(49)
382	Land				-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
383	Buildings				(11)	(21)	(32)	(42)	(53)	(64)	(74)	604	604	604	604	604	604	604	604	604	604	604	604	604
384	Vendor Fees				(145)	(764)	(1,384)	(2,003)	(2,623)	(3,242)	(3,861)	(3,323)	(30)	(33)	(37)	(41)	(44)	(48)	(52)	(55)	(59)	(63)	(67)	(70)
385	Installer Fees				(191)	(561)	(932)	(1,302)	(1,673)	(2,043)	(2,414)	(1,256)	(430)	(484)	(538)	(592)	(646)	(699)	(753)	(807)	(861)	(914)	(968)	(1,022)
380	Internal Labour				(24)	(138)	(253)	(367)	(482)	(597)	(711)	(037)	(7.4)	(120)	(197)	(242)	(200)	(256)	(412)	(20)	(101)	(164)	(228)	(204)
388	Training				(∠1) (12)	(40)	(09)	(93)	(117)	(141)	(105)	(16)	(74)	(130)	(107)	(243)	(299)	(300)	(412)	(SO) (P)	(IUI) (9)	(104)	(226)	(291)
389	Incremental O&M and Capitalized Overhead				(13)	30	(+1)	243	405	607	(50)	(+)	(+)	1 146	(3)	1 172	1 203	1 235	1 268	1 301	1 336	(3)	1 409	1 447
390	Total Closing Accumulated Depreciation	x-ref S3a, line 44			(468)	(1.750)	(2.991)	(4.190)	(5.113)	(6.106)	(7.147)	(4.180)	1.072	1.076	919	792	666	539	593	943	809	683	553	608
391					(100)	(1,100)	(=,001)	(1,100)	(0,110)	(0,100)	(,,,,,)	(1,100)	1,012	.,	0.0		000	000	000	0.0	000	000	000	000
392	Opening GPIS				4.282	10,729	10.396	10.062	9,753	9.359	8.920	8,593	4,765	(1.437)	(1.446)	(1.483)	(1.555)	(1.621)	(1.697)	(1.709)	(1.780)	(1.864)	(1.958)	(2.040)
393	Closing GPIS			- 4,282	10,729	10,396	10,062	9,753	9,359	8,920	8,593	4,765	(1,437)	(1,446)	(1,483)	(1,555)	(1,621)	(1,697)	(1,709)	(1,780)	(1,864)	(1,958)	(2,040)	(2,120)
394	Mid-Year GPIS			- 2,141	7,506	10,563	10,229	9,908	9,556	9,139	8,756	6,679	1,664	(1,441)	(1,464)	(1,519)	(1,588)	(1,659)	(1,703)	(1,744)	(1,822)	(1,911)	(1,999)	(2,080)
395				,				.,						/	() -)	()-)/	()	((,)	(, .)	<u>, ,, -</u> /	())	(()
396	Opening Accumulated Depreciation				-	(468)	(1,750)	(2,991)	(4,190)	(5,113)	(6,106)	(7,147)	(4,180)	1,072	1,076	919	792	666	539	593	943	809	683	553
397	Closing Accumulated Depreciation				(468)	(1,750)	(2,991)	(4,190)	(5,113)	(6,106)	(7,147)	(4,180)	1,072	1,076	919	792	666	539	593	943	809	683	553	608
398	Mid-Year Accumulated Depreciation				(234)	(1,109)	(2,371)	(3,590)	(4,651)	(5,609)	(6,626)	(5,664)	(1,554)	1,074	998	856	729	603	566	768	876	746	618	580
399																								
400 401	TGVI Mid-Year Net Plant in Service			- 2,141	7,272	9,454	7,859	6,317	4,904	3,530	2,130	1,015	110	(368)	(467)	(663)	(859)	(1,056)	(1,137)	(976)	(946)	(1,164)	(1,381)	(1,499)

		,																						
		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
402	TGVI Software CIAOC Opening Balance	x-ref S3a, line 46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
403	TGVI Software CIAOC Additions	x-ref S3a, line 47	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
404	TGVI Software CIAOC Retirements	x-ref S3a, line 48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
405	TGVI Software CIAOC Closing Balance	x-ref S3a, line 49	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
406	-																							
407	TGVI Software CIAOC Opening Balance Accumulated Depreciation	x-ref S3a, line 51	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
408	TGVI Software CIAOC Retirements	x-ref S3a, line 52	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
409	TGVI Amortization of Software CIAOC	x-ref S3a, line 53	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
410	TGVI Software CIAOC Closing Balance Accumulated Depreciation	x-ref S3a, line 54	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
411	•																							
412	TGVI Mid Year Software CIAOC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
413																								
414	TGVI Opening Deferred Charges	x-ref S3a, line 61	-	6	821	718	616	513	410	308	205	103	0	0	0	0	0	0	0	0	0	0	0	0
415	TGVI O&M Deferred Charge Additions	S1, line 21	8	1.060		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
416	TGVI O&M Tax on Deferred Charge Additions		(2)	(281)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
417	TGVI O&M Net Deferred Charge Additions	x-ref S3a, line 62	6	779	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
418	TGVI O&M Amortization Expense	x-ref S3a, line 63	-	-	(103)	(103)	(103)	(103)	(103)	(103)	(103)	(103)	-	-	-	-	-	-	-	-	-	-	-	-
419	TGVI O&M Deferred Charge AFUDC	S1. line 22	0	36	-	-	-	· -	· -	-	-		-	-	-	-			-	-	-	-	-	
420	TGVI Closing Deferred Charges	x-ref S3a, line 64	6	821	718	616	513	410	308	205	103	0	0	0	0	0	0	0	0	0	0	0	0	0
421	Capital Lease Rate Base	x-ref S3a, line 67	_	1.775	1.613	1.445	1.271	1.091	907	716	519	316	107	2.066	1.876	1.681	1.479	1.270	1.055	833	604	368	124	-
422	TGVI Mid-Year Deferred Charges		-		770	667	564	462	359	257	154	51	-	_,	.,			.,=			-			-
423	In-Service Adjustment	x-ref S3a, line 68	-	-	(702)	-					-	-	-	-	-	-	-	-	-	-	-	-	-	-
424	TGVI Ratebase	x-ref S3a, line 70	-	3.917	8.952	11.566	9.695	7.870	6.170	4.503	2.803	1.383	217	1.698	1.410	1.018	620	214	(82)	(143)	(342)	(797)	(1.256)	(1.499)
				5,011	2,001	,000	2,000	.,010	2,110	.,500	_,000	.,000	2	.,000	.,	.,010	020	2	(0-)	(110)	(012)	(,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	(.,_00)	(., 100)

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGW		L																					
425 Capital Spanding																							
426 Hardware		2	7		-	-	-	-	-	-		-	-	-	-	-	-			-	-	-	
427 Software		15	4	-	-	-	-	-	-	-	-	-		-	-	-	-				-	-	-
428 Land		-	2	-	-	-	-			-	-	-	-	-		-				-	-	-	-
429 Buildings		1	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
430 Vendor Fees		44	62	10	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
431 Installer Fees		3	55	15	-	-	-	-		-	-	-	-	-	-	-	-			-	-	-	-
432 Internal Labour 433 Internal Materials		3	13	2	-		-				-	-	-	-		-						-	
434 Training		1	2	o	-		-				-		-	-		-				-	-	-	
435 Incremental O&M		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
436 Total Spend	x-ref S6, line 65	76	162	27	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
437																							
438 Opening WIP			2	2																			
439 Haldwale 440 Software		-	15	17	-		-				-		-	-		-	-			-	-	-	
441 Land			-				-			_	-		-	_		-					-	-	
442 Buildings		0	2	-	-	-	-	-	-	-	-	-		-	-	-	-				-	-	-
443 Vendor Fees		4	50	86	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
444 Installer Fees		-	4	21	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
445 Internal Labour			8	17	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
446 Internal Materials		0	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
447 Training 449 Incremental ORM		-	1	-	-	-	-	-		-	-	-	-	-	-	-	-			-	-	-	-
449 Total Opening WIP	x-ref S1 line 18 &	5	83	143																			
450 Additions	x-ref S6, line 65	0	00																				
451 Hardware	,	2	7	-	-	-	-			-	-		-	-		-				-	-	-	
452 Software		15	5	-	-	-	-			-	-	-	-	-		-				-	-	-	-
453 Land		-	2	-	-	-	-		-	-	-	-	-	-		-	-			-	-	-	-
454 Buildings		1	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
455 Vendor Fees		45	66	10	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
456 Installer Fees		4	50	15	-	-	-	-		-	-	-	-	-	-	-	-			-	-	-	-
457 Internal Labour 458 Internal Materials		3	14	2	-		-				-		-	-		-	-			-	-	-	
459 Training		1	2	0		_	-			_	-		-	_		-	_				-	-	
460 Incremental O&M		-		-	-	-	-	-	-	-	-	-		-	-	-	-				-	-	-
461 Total Additions	x-ref S1, line 18	79	168	27	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
462 In-service																							
463 Hardware		-	(6)	(3)	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
464 Software		-	(3)	(17)	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
465 Land 466 Puildings		-	(2)	-	-	-	-	-		-	-	-	-	-	-	-	-			-	-	-	-
467 Vendor Fees			(29)	(96)							-												
468 Installer Fees		-	(39)	(36)	-		-				-		-	-		-				-	-	-	
469 Internal Labour		-	(5)	(18)	-	-	-			-	-		-	-		-				-	-	-	
470 Internal Materials		-	(4)	(1)	-	-	-			-	-	-	-	-		-				-	-	-	-
471 Training		-	(3)	(0)	-	-	-		-	-	-	-	-	-		-	-			-	-	-	-
472 Incremental O&M		-	-	-	-	-	-	-	-		-	-	-	-	-	-	-			-	-	-	-
4/3 I otal In-service		-	(108)	(171)	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
474 Closing WiP 475 Hardware		2	3	_			-				_			_		_					_	_	
476 Software		15	17	-	-		-				-		-	-		-				-	-	-	
477 Land		-	-	-	-	-	-			-	-		-	-		-				-	-	-	
478 Buildings		2		-	-	-	-			-	-	-	-	-		-				-	-	-	-
479 Vendor Fees		50	86	-	-	-	-		-	-	-	-	-	-		-	-			-	-	-	-
480 Installer Fees		4	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
481 Internal Labour		8	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
482 Internal Materials		3		-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
484 Incremental O&M											-												
485 TGW Total Closing WIP		83	143	-	-	-	-		-	-	-	-	-	-		-	-			-	-	-	-
486																							
487 Recurring Plant Additions																							
488 Hardware		-	-	-	-	-	-	4	-	-	-	-	4	-	-	-	-	4	4 -	-	-	-	4
489 Software		-	-	-	-	-	0	-	-	0	1	-	0	-	-	0	-		I 0	-	-	0	-
490 Land		-		-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
491 Dulidings 402 Vender Fees		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-	-	-
493 Installer Fees		-						-		-		-	-	-							-	-	
494 Internal Labour																							-
495 Internal Materials		-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-		- 10	-	-	-	-
496 Training		-		-	-	-		-	-	-	-	-	-	-		-				-	-	-	-
497 Capitalized Overhead		-		(8)	(8)	(8)	(8)	(7)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(9) (9	9) (9) (9)	(9)	(9)	(9)
498 Total Recurring Plant Additions		-	-	(8)	(8)	(8)	(7)	(4)	(8)	(8)	3	(8)	(4)	(8)	(8)	(8)	(9) (4	4) 1	(9)	(9)	(9)	(5)

499

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
500	Opening Plant Balance		-																					
501	Hardware		-	-	6	9	9	9	9	7	4	4	4	4	4	4	4	4	4	4	4	4	4	4
502	Software		-	-	3	20	20	20	20	20	20	20	18	2	2	2	2	2	2	3	2	2	2	2
503	Land		-	-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
504	Buildings		-	-	17	17	17	17	17	17	17	17	-	-	-	-	-	-	-	-	-	-	-	-
505	Vendor Fees		-	-	29	125	125	125	125	125	125	125	96	1	1	1	1	1	1	1	1	1	1	1
506	Installer Fees		-	-	39	74	74	74	74	74	74	74	36	11	11	11	11	11	11	11	11	11	11	11
507	Internal Labour		-	-	5	23	23	23	23	23	23	23	18	-	-	-	-	-	-	-	-	-	-	-
508	Internal Materials		-	-	4	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	11	11	11	11
509	Training		-	-	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0
510	Incremental O&M and Capitalized Overhead		-	-	-	(8)	(16)	(24)	(32)	(39)	(47)	(54)	(62)	(62)	(62)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)
511	Total Opening Plant Balance	x-ref S3a, line 71	-	-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)
512	3													()	()	()	(-)	()	()	()	(-)	()	()	(-)
513	Additions																							
514	Hardware		-	6	3	-	-	-	4	-	-	-	-	4	-	-			4	-		-		4
515	Software		-	3	17	-	-	0	-	-	0	1	-	0	-	-	0	-	1	0	-	-	0	-
516	Land		-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
517	Buildinas		-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
518	Vendor Fees		-	29	96	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
519	Installer Fees		-	39	36	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
520	Internal Labour		-	5	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
521	Internal Materials		-	4	1	-	-	-	-	-	-	10	-	-	-	-	-	-	-	10	-	-	-	-
522	Training		-	3	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
523	Incremental O&M and Capitalized Overhead		-	-	(8)	(8)	(8)	(8)	(7)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(8)	(9)	(9)	(9)	(9)	(9)	(9)	(9)
524	Total Additions	x-ref S3a, line 72	-	108	163	(8)	(8)	(7)	(4)	(8)	(8)	3	(8)	(4)	(8)	(8)	(8)	(9)	(4)	1	(9)	(9)	(9)	(5)
525																								
526	Retirements																							
527	Hardware		-	-	-	-	-	-	(6)	(3)	-	-	-	(4)	-	-	-	-	(4)	-	-	-	-	(4)
528	Software		-	-	-	-	-	-	-	-	-	(3)	(17)	-	-	(0)	-	-	(0)	(1)	-	(0)	-	-
529	Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
530	Buildings		-	-	-	-	-	-	-	-	-	(17)	-	-	-	-	-	-	-	-	-	-	-	-
531	Vendor Fees		-	-	-	-	-	-	-	-	-	(29)	(95)	-	-	-	-	-	-	-	-	-	-	-
532	Installer Fees		-	-	-	-	-	-	-	-	-	(39)	(25)	-	-	-	-	-	-	-	-	-	-	-
533	Internal Labour		-	-	-	-	-	-	-	-	-	(5)	(18)	-	-	-	-	-	-	-	-	-	-	-
534	Internal Materials		-	-	-	-	-	-	-	-	-	(4)	-	-	-	-		-	-	(10)		-		-
535	Training		-	-	-	-	-	-	-	-	-	(3)	-	-	-	-	-	-	-	-	-	-	-	-
536	Incremental O&M and Capitalized Overhead		-	-	-	-	-	-	-	-	-	-	8	8	8	8	7	8	8	8	8	8	8	8
537	Total Retirements	x-ref S3a, line 73	-	-	-	-	-	-	(6)	(3)	-	(100)	(148)	4	8	7	7	8	4	(3)	8	8	8	4
538																								
539	Closing Plant Balance																							
540	Hardware		-	6	9	9	9	9	7	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
541	Software		-	3	20	20	20	20	20	20	20	18	2	2	2	2	2	2	3	2	2	2	2	2
542	Land		-	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
543	Buildings		-	17	17	17	17	17	17	17	17	-	-	-	-	-	-	-	-	-	-	-	-	-
544	Vendor Fees		-	29	125	125	125	125	125	125	125	96	1	1	1	1	1	1	1	1	1	1	1	1
545	Installer Fees		-	39	74	74	74	74	74	74	74	36	11	11	11	11	11	11	11	11	11	11	11	11
546	Internal Labour		-	5	23	23	23	23	23	23	23	18	-	-	-		-			-	-	-	-	-
547	Internal Materials		-	4	5	5	5	5	5	5	5	10	10	10	10	10	10	10	10	11	11	11	11	11
548	Training		-	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0
549	Incremental O&M and Capitalized Overhead		-	-	(8)	(16)	(24)	(32)	(39)	(47)	(54)	(62)	(62)	(62)	(62)	(63)	(64)	(65)	(66)	(67)	(68)	(69)	(70)	(71)
550	Total Closing Plant Balance	x-ref S3a, line 74	-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)	(41)
551	-												,	. /	. /	. ,	,	/	,	. /	,	,	,	. ,

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
552 Opening Accumulated Depreciation																							
553 Hardware		-	-	-	(1)	(3)	(5)	(6)	(2)	(1)	(2)	(2)	(3)	-	(1)	(2)	(2)	(3)		(1)	(2)	(2)	(3)
554 Software		-	-	-	(0)	(3)	(5)	(8)	(10)	(13)	(16)	(15)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(0)	(1)	(1)	(1)
555 Land			-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
556 Buildings		-	-	-	(0)	(1)	(1)	(1)	(1)	(2)	(2)	15	15	15	15	15	15	15	15	15	15	15	15
557 Vendor Fees		-	-	-	(4)	(19)	(35)	(51)	(66)	(82)	(98)	(84)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)
558 Installer Fees		-	-	-	(5)	(14)	(23)	(33)	(42)	(51)	(61)	(31)	(11)	(12)	(13)	(15)	(16)	(17)	(19)	(20)	(21)	(23)	(24)
559 Internal Labour		-	-	-	(1)	(3)	(6)	(9)	(12)	(15)	(18)	(16)	-	-	-	-	-	-	-	-	-	-	-
560 Internal Materials			-	-	(1)	(1)	(2)	(2)	(3)	(4)	(4)	(0)	(2)	(3)	(4)	(6)	(7)	(8)	(9)	(1)	(2)	(4)	(5)
561 Training		-	-	-	(0)	(1)	(1)	(1)	(2)	(2)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
562 Incremental O&M and Capitalized Overhead			-	-	-	1	3	6	10	15	21	27	27	27	27	27	27	28	28	29	29	29	30
563 Total TGW Depreciation Expense	x-ref S3a, line 76	-	-	-	(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10
564																							
565 Retirements																							
566 Hardware		-	-	-	-	-	-	6	3	-	-	-	4	-	-	-	-	4	-	-	-	-	4
567 Software		-	-	-	-	-	-	-	-	-	3	17	-	-	0	-	-	0	1	-	0	-	-
568 Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
569 Buildings		-	-	-	-	-	-	-	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-
570 Vendor Fees		-	-	-	-	-	-	-	-	-	29	95	-	-	-	-	-	-		-	-	-	-
571 Installer Fees		-	-	-	-	-	-	-	-	-	39	23	-	-	-	-	-	-	-	-	-	-	-
572 Internal Labour		-	-	-	-	-	-	-	-	-	4	10	-	-	-	-	-	-	10	-	-	-	
574 Training				-							3	-							10				
575 Incremental O&M and Capitalized Overhead				_			_		-	_	-	(8)	(8)	(8)	(8)	(7)	(8)	(8)	(8)	(8)	(8)	(8)	(8)
576 Total Closing Accumulated Depreciation	x-ref S3a, line 78		-	-	-	-	-	6	3	-	100	148	(4)	(8)	(7)	(7)	(8)	(4)	3	(8)	(8)	(8)	(4)
577								0	0		100		(.)	(0)	(.)	(.)	(0)	(.)	0	(0)	(0)	(0)	(.)
578 Depreciation Expense																							
579 Hardware			-	(1)	(2)	(2)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
580 Software		-	-	(0)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(2)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
581 Land		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
582 Buildings		-	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	-	-	-	-	-	-	-	-	-	-	-	-
583 Vendor Fees			-	(4)	(16)	(16)	(16)	(16)	(16)	(16)	(16)	(12)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
584 Installer Fees		-	-	(5)	(9)	(9)	(9)	(9)	(9)	(9)	(9)	(4)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
585 Internal Labour		-	-	(1)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(2)	-	-	-	-	-	-	-	-	-	-	-
586 Internal Materials		-	-	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)
587 Training			-	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
588 Incremental O&M and Capitalized Overhead			-	-	1	2	3	4	5	6	7	8	8	8	8	8	8	8	8	8	8	9	9
589 Total TGW Depreciation Expense	x-ref S3a, line 77	-	-	(12)	(32)	(31)	(30)	(29)	(28)	(27)	(26)	(15)	4	4	4	4	4	4	4	5	5	5	5
590																							
591 Closing Accumulated Depreciation				(1)	(2)	(5)	(6)	(2)	(4)	(2)	(2)	(2)		(4)	(2)	(2)	(2)		(4)	(2)	(2)	(2)	
592 Haluwale		-	-	(1)	(3)	(5)	(0)	(2)	(1)	(2)	(2)	(3)	-	(1)	(2)	(2)	(3)	(1)	(1)	(2)	(2)	(3)	- (4)
593 Soliwale				(0)	(3)	(3)	(0)	(10)	(13)	(10)	(13)	(0)	(0)	(1)	(1)	(1)	(1)	(1)	(0)	(1)	(1)	(1)	(1)
505 Buildings			_	(0)	(1)	(1)	(1)	(1)	(2)	(2)	15	15	15	15	15	15	15	15	15	15	15	15	15
596 Vendor Fees				(0)	(19)	(35)	(51)	(66)	(82)	(98)	(84)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(2)	(2)	(2)
597 Installer Fees			-	(5)	(14)	(23)	(33)	(42)	(51)	(61)	(31)	(11)	(12)	(13)	(15)	(16)	(17)	(19)	(20)	(21)	(23)	(24)	(25)
598 Internal Labour		-	-	(1)	(3)	(6)	(9)	(12)	(15)	(18)	(16)	-	(/	(,	()	(,	(,	(,	()	(()	(= -)	()
599 Internal Materials		-	-	à	(1)	(2)	(2)	(3)	(4)	(4)	(0)	(2)	(3)	(4)	(6)	(7)	(8)	(9)	(1)	(2)	(4)	(5)	(6)
600 Training			-	(0)	(1)	(1)	(1)	(2)	(2)	(2)	(0)	(0)	(0)	(o)	(0)	(0)	(0)	(0)	(0)	(0)	(o)	(0)	(0)
601 Incremental O&M and Capitalized Overhead			-	-	1	3	6	10	15	21	27	27	27	27	27	27	28	28	29	29	29	30	30
602 Total Closing Accumulated Depreciation	x-ref S3a, line 79	-	-	(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10	11
603																							
604 Opening GPIS		-	-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)
605 Closing GPIS		-	108	271	263	255	247	238	227	220	123	(33)	(33)	(33)	(34)	(35)	(36)	(35)	(37)	(38)	(39)	(40)	(41)
606 Mid-Year GPIS		-	54	190	267	259	251	242	232	223	171	45	(33)	(33)	(34)	(34)	(35)	(36)	(36)	(38)	(39)	(40)	(41)
607																							
608 Opening Accumulated Depreciation		-	-		(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10
609 Closing Accumulated Depreciation			-	(12)	(44)	(76)	(106)	(129)	(155)	(181)	(106)	26	26	22	19	15	12	13	20	17	14	10	11
610 Mid-Year Accumulated Depreciation		-	-	(6)	(28)	(60)	(91)	(118)	(142)	(168)	(144)	(40)	26	24	20	17	14	12	16	19	15	12	11
611						100		105									105	101	100		(a ::	(0.0)	10.00
612 TGW Mid-Year Net Plant in Service			54	184	239	199	160	125	90	56	27	4	(7)	(9)	(13)	(17)	(22)	(23)	(20)	(19)	(24)	(28)	(30)

		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
613																								
614 TG	W Software CIAOC Opening Balance	x-ref S3a, line 81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
615 TG	W Software CIAOC Additions	x-ref S3a, line 82	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
616 TG	W Software CIAOC Retirements	x-ref S3a, line 83	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
617 TG	W Software CIAOC Closing Balance	x-ref S3a, line 84	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-
618																								
619 TG	W Software CIAOC Opening Balance Accumulated Depreciation	x-ref S3a, line 86	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
620 TG	W Software CIAOC Retirements	x-ref S3a, line 87	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
621 TG	W Amortization of Software CIAOC	x-ref S3a, line 88	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
622 TG	W Software CIAOC Closing Balance Accumulated Depreciation	x-ref S3a, line 89	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
623																								
624 TG	W Mid Year Software CIAOC		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
625																								
626 TG	W Opening Deferred Charges	x-ref S3a, line 96	-	0	21	18	16	13	10	8	5	3	0	0	0	0	0	0	0	0	0	0	0	0
627 T	GW O&M Deferred Charge Additions	S1, line 21	0	27	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
628 T	GW O&M Tax on Deferred Charge Additions		(0)	(7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
629 T	GW O&M Net Deferred Charge Additions	x-ref S3a, line 97	0	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
630 T	GW O&M Amortization Expense	x-ref S3a, line 98	-	-	(3)	(3)	(3)	(3)	(3)	(3)	(3)	(3)	-	-	-	-	-	-	-	-	-	-	-	-
631 T	GW O&M Deferred Charge AFUDC	S1, line 22	0	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
632 TG	W Closing Deferred Charges	x-ref S3a, line 99	0	21	18	16	13	10	8	5	3	0	0	0	0	0	0	0	0	0	0	0	0	0
633 Ca	pital Lease Rate Base	x-ref S3a, line 102	-	45	40	35	31	26	21	17	12	7	2	46	41	37	32	27	22	17	12	7	2	-
634 TG	W Mid-Year Deferred Charges		-	-	19	17	14	12	9	6	4	1	-	-	-	-	-	-	-	-	-	-	-	-
635 In-8	Service Adjustment	x-ref S3a, line 103	-	-	(18)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
636 TG	W Ratebase	x-ref S3a, line 105	-	99	225	291	244	198	155	114	71	36	7	39	32	23	14	5	(1)	(3)	(7)	(16)	(25)	(30)

Financial Schedule 4a

Training outsoure 4a
Customer Care Enhancement Project
Capital Cost Allowance Summary in \$000s
* Note- the revenue requirement and tax expense amount showing in 2011 are for financial model purposes only; as requested in the CPCN Application from June 2, 2009, all costs prior to January 1, 2012 will be captured in an AFUDC earning non-rate base deferral account.

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGI																							
1 Opening UCC Balance	S4b, line 11	-	-	34,768	86,401	83,909	81,696	79,848	79,176	77,249	75,562	77,456	75,972	75,671	74,040	72,564	71,260	69,995	70,220	71,872	70,570	69,372	68,303
2 Additions	S4b, line 23	-	35,269	52,582	(1,691)	(1,669)	(1,502)	(296)	(1,548)	(1,509)	1,979	(1,589)	(327)	(1,617)	(1,631)	(1,594)	(1,661)	(78)	1,462	(1,712)	(1,730)	(1,699)	(577)
3 CCA*	S4b, lines 26, 28, 32 & 34	-	(501)	(949)	(801)	(544)	(346)	(376)	(379)	(179)	(85)	105	26	(14)	156	289	397	304	190	410	533	631	532
4 Closing UCC Balance		-	34,768	86,401	83,909	81,696	79,848	79,176	77,249	75,562	77,456	75,972	75,671	74,040	72,564	71,260	69,995	70,220	71,872	70,570	69,372	68,303	68,259
5																							
6 TGVI																							
7 Opening UCC Balance	S4b, line 60	-	-	2,718	4,603	1,459	1,146	874	751	467	207	405	126	35	(247)	(505)	(746)	(983)	(1,021)	(838)	(1,110)	(1,365)	(1,606)
8 Additions	S4b, line 72	-	4,179	6,224	(208)	(209)	(191)	(38)	(204)	(202)	270	(220)	(46)	(232)	(238)	(237)	(251)	(12)	229	(273)	(280)	(280)	(97)
9 CCA	S4b, line 84	-	(1,461)	(4,339)	(2,936)	(103)	(81)	(85)	(81)	(58)	(71)	(58)	(45)	(50)	(20)	(4)	14	(26)	(46)	0	26	39	25
10 Closing UCC Balance		-	2,718	4,603	1,459	1,146	874	751	467	207	405	126	35	(247)	(505)	(746)	(983)	(1,021)	(838)	(1,110)	(1,365)	(1,606)	(1,678)
11																							
12 TGW																							
13 Opening UCC Balance	S4b, line 109	-	-	69	117	37	30	23	21	14	8	13	7	5	(1)	(6)	(11)	(16)	(16)	(12)	(17)	(21)	(25)
14 Additions	S4b, line 121	-	106	157	(5)	(5)	(5)	(1)	(5)	(5)	6	(5)	(1)	(5)	(5)	(5)	(5)	(0)	5	(6)	(6)	(6)	(2)
15 CCA	S4b, line 133	-	(37)	(109)	(74)	(2)	(2)	(2)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	0	1	(0)	(1)	1	1	1	1
16 Closing UCC Balance		-	69	117	37	30	23	21	14	8	13	7	5	(1)	(6)	(11)	(16)	(16)	(12)	(17)	(21)	(25)	(26)

17 18 *Excludes all software related CCA; tax savings associated with software are included as a Contribution in Aid of Construction and amortized over a period of 8 years

19		
20	CCA Rates Used	
21		
22	Hardware_CCA	30.00%
23	Software_CCA	100.00%
24	Buildings_CCA	6.00%
25	VendorFees_CCA	100.00%
26	InstallerFees_CCA	100.00%
27	InternalLabour_CCA	4.00%
28	InternalMaterials_CCA	4.00%
29	Overhead_Cap_CCA	4.00%
30		
31	Amortization of Software CIAOC	12.50%

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGI Capital Cost Allowance																							
1 UCC Opening				4 000		4.050	054			4 000	7.0			4 005		005				070			
2 Hardware		-	-	1,693	1,941	1,359	951	666	1,517	1,062	743	520	364	1,295	906	635	444	311	1,246	872	611	427	299
3 Software		-	-	532	2,599	-		27			26	197		26			26		194	26			26
4 Buildings		-	-	5,608	5,271	4,955	4,658	4,378	4,115	3,869	3,636	3,418	3,213	3,020	2,839	2,669	2,509	2,358	2,217	2,084	1,959	1,841	1,731
5 Vendor Fees		-	-	4,839	15,187	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6 Installer Fees		-	-	6,427	5,855	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7 Internal Labour		-	-	1,552	7,208	6,920	6,643	6,377	6,122	5,877	5,642	5,417	5,200	4,992	4,792	4,601	4,417	4,240	4,070	3,907	3,751	3,601	3,457
8 Internal Materials		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9 Training		-	-	890	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925	925
10 Incremental O&M and Capitalized Overhead		-	-	-	(1,594)	(3,187)	(4,695)	(6,031)	(7,292)	(8,517)	(9,707)	(10,862)	(11,985)	(13,076)	(14,138)	(15,171)	(16,177)	(17,158)	(18,116)	(19,051)	(19,967)	(20,864)	(21,745)
11 Total UCC Opening Balance	x-ref S4a, line 1	-	-	21,541	37,393	10,971	8,481	6,341	5,388	3,216	1,267	(385)	(2,283)	(2,818)	(4,675)	(6,342)	(7,857)	(9,325)	(9,463)	(11,237)	(12,721)	(14,069)	(15,307)
12																							
13 UCC Additions																							
14 Hardware		-	1,992	889	-	-	-	1,236	-	-	-	-	1,224	-	-	-	-	1,210	-	-	-	-	1,196
15 Software		-	1,064	5,198	-	-	53	-	-	53	395	-	52	-	-	52	-	389	52	-	-	51	-
16 Buildings		-	5,781	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17 Vendor Fees		-	9,678	30,374	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18 Installer Fees		-	12,853	11,710	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
19 Internal Labour		-	1,584	5,835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20 Internal Materials		-	1,426	167	-	-	-	-	-	-	3,160	-	-	-	-	-	-	-	3,104	-	-	-	-
21 Training		-	890	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22 Incremental O&M and Capitalized Overhead		-	-	(1,626)	(1,691)	(1,669)	(1,555)	(1,532)	(1,548)	(1,561)	(1,575)	(1,589)	(1,603)	(1,617)	(1,631)	(1,646)	(1,661)	(1,677)	(1,694)	(1,712)	(1,730)	(1,751)	(1,772)
23 Total UCC Additions	x-ref S4a, line 2	-	35,269	52,582	(1,691)	(1,669)	(1,502)	(296)	(1,548)	(1,509)	1,979	(1,589)	(327)	(1,617)	(1,631)	(1,594)	(1,661)	(78)	1,462	(1,712)	(1,730)	(1,699)	(577)
24																							
25 CCA																							
26 Hardware	x-ref S4a, line 3	-	(299)	(641)	(582)	(408)	(285)	(385)	(455)	(319)	(223)	(156)	(293)	(388)	(272)	(190)	(133)	(275)	(374)	(262)	(183)	(128)	(269)
27 TGI Software CCA		-	(532)	(3,131)	(2,599)	-	(27)	(27)	-	(26)	(224)	(197)	(26)	(26)	- /	(26)	(26)	(194)	(220)	(26)	-	(26)	(26)
28 Buildings	x-ref S4a, line 3	-	(173)	(336)	(316)	(297)	(279)	(263)	(247)	(232)	(218)	(205)	(193)	(181)	(170)	(160)	(151)	(141)	(133)	(125)	(118)	(110)	(104)
29 Vendor Fees CCA		-	(4.839)	(20.026)	(15,187)	-	()	()		(/	-	-	-	-	-	-	-	-	-	(-===)	-	-	-
30 Installer Fees CCA		-	(6.427)	(12,281)	(5.855)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31 Internal Labour CCA		-	(32)	(179)	(288)	(277)	(266)	(255)	(245)	(235)	(226)	(217)	(208)	(200)	(192)	(184)	(177)	(170)	(163)	(156)	(150)	(144)	(138)
32 Internal Materials CCA	x-ref S4a, line 3	-	(29)	(3)	-	-	()	()	(=)	()	(63)	-	()	-	-	-	-	-	(62)	-	-	-	-
33 Training	x for o la, into o	-	(20)	- (0)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(02)	-		-	-
34 Incremental O&M and Capitalized Overhead	x-ref S4a line 3	-	-	33	98	161	219	272	323	372	420	466	511	555	598	640	680	720	759	796	833	870	905
35 Total TGLCCA	x for o la, into o		(12,330)	(36 566)	(24 730)	(821)	(638)	(658)	(624)	(440)	(534)	(309)	(208)	(240)	(36)	79	194	(60)	(194)	227	383	461	368
36			(12,000)	(00,000)	(21,700)	(021)	(000)	(000)	(02.)	(110)	(001)	(000)	(200)	(2.10)	(00)			(00)	(101)		000		000
37 LICC Ending Balance																							
38 Hardware		_	1 693	1 9/1	1 359	951	888	1 517	1.062	743	520	364	1 295	906	635	444	311	1 246	872	611	427	200	1 226
39 Software		_	532	2 599	1,000	-	27	1,517	1,002	26	197		26		-	26	-	194	26	-	427	200	1,220
40 Buildings			5 609	5 271	4 055	4 659	4 3 7 9	4 115	2 960	2 6 2 6	2 / 19	2 212	2 020	2 820	2 660	2 500	2 259	2 217	2 094	1 050	1 9/1	1 721	1 627
40 Dundings 41 Vonder Food			4 920	15 197	4,555	4,000	4,370	4,115	3,003	3,030	3,410	3,213	3,020	2,035	2,005	2,303	2,330	2,217	2,004	1,555	1,041	1,731	1,027
41 Vendor Fees		-	4,005	5 955	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42 Internal Labour		-	1,427	7 209	6 020	6 6 4 2	6 277	6 1 2 2	5 977	- 5 640	- 5 /17	5 200	4 002	4 700	4 604	-	4 240	4 070	2 007	2 754	2 604	2 457	2 210
40 Internal Materials			1,002	1,200	0,920	0,043	0,377	0,122	5,077	5,642	3,417	5,200	4,992	4,192	4,001	4,417	4,240	4,070	3,907	3,131	3,001	3,437	3,319
44 Interfield Waterials		-	1,398	104	-	-	- 007	-	-	-	3,090	-	- 025	- 025	-	- 025	-	-	3,042	-	-	- 025	-
40 Frankling		-	890	925	925	920	925	925	920	925	925	925	925	925	920 (15 174)	925	920	920	925	925	925	925	925
40 Incremental Oxivi and Capitalized Overnead		-	-	(1,594)	(3,187)	(4,090)	(0,031)	(7,292)	(8,517)	(9,707)	(10,862)	(11,985)	(13,076)	(14,138)	(15,171)	(10,177)	(17,158)	(18,116)	(19,051)	(19,907)	(20,864)	(21,745)	(22,012)
4/ Total OCC Ending Balance		-	22,939	37,550	10,971	8,481	0,341	5,388	3,210	1,207	2,712	(2,283)	(2,818)	(4,075)	(0,342)	(/,85/)	(9,325)	(9,403)	(8,195)	(12,721)	(14,069)	(15,307)	(15,516)
			(0.4.40)	(0.005)	(5.000)	(00)	(70)	(70)	(04)	(05)	(400)	(40.5)	(50)	(50)	(40)	(50)	(54)	(04)	(44.4)	(40)	(00)	(40)	(44)
49 I GI SOTTWARE CIAOC Addition		-	(3,142)	(8,905)	(5,982)	(69)	(73)	(70)	(61)	(65)	(128)	(104)	(59)	(56)	(48)	(53)	(51)	(91)	(111)	(46)	(38)	(42)	(41)

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGVI Capital Cost Allowance																							
50																							
50 UCC Opening				004	000	404	440	70	404	404	0.4		40	470	405	00	64	40	400	400	00	05	45
51 Hardware		-	-	201	230	161	113	/9	191	134	94	00	40	1/9	125	88	01	43	188	132	92	60	45
52 Software		-	-	666	303	-	-	500	400	-	4 4 2 2	406		250	-	217	209	-	262	247	(0)	(0)	205
53 Buildings 54 Vender Free			-	571	1 706	000	555	520	400	459	432	406	301	330	337	317	290	200	203	247	232	219	205
54 Vendor Fees			-	764	700	-	-			-	-			-	-	-	-	-			-	-	-
55 Internel Lebeur			-	194	952	910	796	755	725	-	-	6/1	615	501	567	545	522	502	492	462	444	426	400
57 Internal Materials			-	104			700	755	725	- 050		041	015				525	502	402	402	444	420	405
58 Training		_	_	105	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109	109
50 Incremental ORM and Capitalized Overhead		_	_	105	(193)	(389)	(578)	(748)	(913)	(1.076)	(1 238)	(1 300)	(1 559)	(1 718)	(1 877)	(2 035)	(2 103)	(2 352)	(2 510)	(2 670)	(2.830)	(2 002)	(3 155)
60 Total LICC Opening Balance	v-ref \$4a_line 7		-	2 554	4 4 2 6	1 288	983	717	601	322	68	(1,000)	(407)	(477)	(738)	(977)	(1 198)	(1 418)	(1.438)	(1 715)	(1.952)	(2,173)	(2,381)
61	x ici o+a, inic i			2,001	1, 120	1,200	000		001	0LL	00	(100)	(107)	()	(100)	(011)	(1,100)	(1,110)	(1,100)	(1,110)	(1,002)	(2,110)	(2,001)
62 LICC Additions																							
63 Hardware		-	237	104	-	-	-	160	-	-	-	-	173	-	-	-	-	186	-	-	-	-	201
64 Software		-	125	609	-	-	7	-	-	7	54	-	7	-		8	-	60	8	-	-	8	-
65 Buildings		-	686	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
66 Vendor Fees		-	1,143	3.593	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
67 Installer Fees		-	1,528	1,400	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	-	-	-
68 Internal Labour		-	188	690	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69 Internal Materials		-	167	20	-	-	-	-	-	-	431	-	-	-	-	-	-	-	486	-	-	-	-
70 Training		-	105	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71 Incremental O&M and Capitalized Overhead		-	-	(197)	(208)	(209)	(198)	(198)	(204)	(209)	(215)	(220)	(226)	(232)	(238)	(245)	(251)	(258)	(265)	(273)	(280)	(289)	(297)
72 Total UCC Additions	x-ref S4a, line 8	-	4,179	6,224	(208)	(209)	(191)	(38)	(204)	(202)	270	(220)	(46)	(232)	(238)	(237)	(251)	(12)	229	(273)	(280)	(280)	(97)
73																							
74 CCA																							
75 Hardware		-	(36)	(76)	(69)	(48)	(34)	(48)	(57)	(40)	(28)	(20)	(40)	(54)	(38)	(26)	(18)	(41)	(56)	(40)	(28)	(19)	(44)
76 TGVI Software CCA		-	(63)	(367)	(305)	-	(3)	(3)	-	(4)	(30)	(27)	(4)	(4)	-	(4)	(4)	(30)	(34)	(4)	-	(4)	(4)
77 Buildings		-	(21)	(40)	(38)	(35)	(33)	(31)	(29)	(28)	(26)	(24)	(23)	(22)	(20)	(19)	(18)	(17)	(16)	(15)	(14)	(13)	(12)
78 Vendor Fees CCA		-	(571)	(2,368)	(1,796)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
79 Installer Fees CCA		-	(764)	(1,464)	(700)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
80 Internal Labour CCA		-	(4)	(21)	(34)	(33)	(31)	(30)	(29)	(28)	(27)	(26)	(25)	(24)	(23)	(22)	(21)	(20)	(19)	(18)	(18)	(17)	(16)
81 Internal Materials CCA		-	(3)	(7)	(7)	(7)	(7)	(6)	(6)	(6)	(14)	(22)	(21)	(20)	(20)	(19)	(18)	(17)	(26)	(35)	(34)	(32)	(31)
82 Training		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
83 Incremental O&M and Capitalized Overhead		-	-	4	12	20	27	34	41	47	54	60	67	73	80	86	93	99	106	112	119	125	132
84 Total TGVI CCA	x-ref S4a, line 9	-	(1,461)	(4,339)	(2,936)	(103)	(81)	(85)	(81)	(58)	(71)	(58)	(45)	(50)	(20)	(4)	14	(26)	(46)	0	26	39	25
85																							
86 UCC Ending Balance			004	000	464	440	70	404	40.4	0.4	00	40	470	405	00		10	400	400	00	05	45	000
87 Hardware		-	201	230	161	113	/9	191	134	94	00	46	1/9	125	88	10	43	188	132	92	(0)	45	202
88 Software		-	63	305	-	-	500	-	-	4	27	-	250	-	-	209	-	30	247	(0)	(0)	205	(0)
09 Buildings		-	571	1 706	500	555	520	400	459	432	400	301	300	337	317	290	200	203	247	232	219	205	193
90 Vendor Fees		-	371	700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91 Installer Fees 92 Internal Labour		-	194	200	- 910	- 796	-	- 725	-	-	- 6/1	- 615	-	-	-	-	-	-	-	-	-	-	- 202
92 Internal Labour			164	000	(7)	(7)	(7)	(6)	690	(6)	416	(22)	(21)	(20)	(20)	(10)	(19)	402	402	(25)	420	409	(21)
94 Training		-	104	100	109	100	100	100	100	100	100	(22)	100	(20)	(20)	100	100	100	100	100	100	(32)	100
95 Incremental ORM and Capitalized Overhead			105	(193)	(389)	(578)	(748)	(013)	(1 076)	(1 238)	(1 300)	(1 559)	(1 718)	(1.877)	(2 035)	(2 103)	(2 352)	(2 510)	(2.670)	(2.830)	(2 002)	(3 155)	(3 320)
96 Total LICC Ending Balance		<u> </u>	2 718	4 430	1 281	976	711	594	316	(1,230)	266	(420)	(1,710)	(758)	(2,000)	(1 217)	(1,436)	(1 455)	(1 255)	(2,030)	(2,352)	(2 414)	(2 454)
97			2,710	4,400	1,201	510	,	0.04	515	02	200	(=23)	(450)	(100)	(555)	(1,217)	(1,400)	(1,400)	(1,200)	(1,307)	(2,207)	(4,7,4)	(2,404)
98 TGVI Software CIAOC Addition		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGW Capital Cost Allowance		8																					
99 UCC Opening				5	6	4		2	F		2	2	4	4	2		4	4	4		2	4	4
100 Hardware		-	-	5	0	4	3	2	5	3	2	2		4	3	2	1	'	4	3	2		1
101 Software		-	-	17	16	- 15	- 14	12	- 12	- 12	11	10	- 10	0	- 0	- 0	0	- 7	7	6	-	-	5
102 Buildings			-	14	10	15	14	15	12	12		10	10	3	5	0	0		,	0	0	0	5
104 Installer Face			-	14	40	-	-	-	-		-	-	-	-	-			-			-		
105 Internal Labour			-	15	22	- 21	- 20	10	- 19	19	17	- 16	- 16	15	- 14	- 14	- 12	- 19	- 12	12	- 11	- 11	10
106 Internal Materiala			-	5	22	21	20	13	10	10		10	10	15	14	14	15	13	12	12			10
107 Training				- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3	- 3		- 3	- 3	- 3	- 3	- 3
108 Incremental ORM and Capitalized Overhead		_	_		(5)	(10)	(14)	(18)	(22)	(26)	(30)	(33)	(37)	(40)	(44)	(47)	(50)	(53	(57)	(60)	(63)	(88)	(69)
109 Total LICC Opening Balance	x-rof \$4a, line 13		-	64	112	33	25	19	16	(20)	(00)	(33)	(8)	(0+)	(15)	(20)	(25)	(30	(30)	(00)	(03)	(45)	(50)
110 Total DCC Opening Balance	x-161 34a, 1116 13			04	112	55	25	15	10	5	0	(2)	(0)	(3)	(13)	(20)	(20)	(00	(50)	(00)	(41)	(43)	(50)
111 LICC Additions																							
112 Hardwara			6	3			-	4	-		-	-	4			_	_	4					4
113 Software		_	3	16	_	_	0			0	1	_	4	_	_	0	_	1	0	_	_	0	
114 Buildings			17	- 10			- 0			- 0	. '	-	- 0			- 0						- 0	
115 Vondor Ecos		_	29	91	_	_	_	_		_		_	_	_	_	_	_		_	_	_	_	_
116 Installer Foos		_	30	35	_	_	_	_		_		_	_	_	_	_	_		_	_	_	_	_
117 Internal Labour		_	5	17	_	_	_	_		_		_	_	_	_	_	_		_	_	_	_	_
118 Internal Materials		_	4	1	_	_	_	_		_	10	_	_	_	_	_	_		10	_	_	_	_
119 Training		_	3	0	_	_	_	_		_	- 10	_	_	_	_	_	_		- 10	_	_	_	_
120 Incremental ORM and Capitalized Overhead		_		(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5)	(5	(6)	(6)	(6)	(6)	(6)
121 Total LICC Additions	v-ref S4a line 14		106	157	(5)	(5)	(5)	(1)	(5)	(5)	6	(5)	(1)	(5)	(5)	(5)	(5)	(0) 5	(6)	(6)	(6)	(2)
122	x-161 34a, iiile 14		100	107	(0)	(0)	(0)	(1)	(0)	(0)	0	(3)	(1)	(0)	(0)	(0)	(0)	(0	, 3	(0)	(0)	(0)	(2)
123 CCA																							
124 Hardware		-	(1)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(0)	(1)	(1)	(1)	(1)	(0)	(1) (1)	(1)	(1)	(0)	(1)
125 TGW Software CCA		_	(2)	(2)	(2)	(1)	(1)	(1)	(1)	(1)	(1)	(0)	(1)	(1)	(1)	(1)	(0)	(1) (1)		(1)	(0)	(1)
126 Buildings		_	(1)	(3)	(0)	(1)	(0)	(0)	(1)	(0)	(1)	(1)	(0)	(0)	(1)	(0)	(0)	()) (1)	(0)	(0)	(0)	(0)
127 Vonder Ecos CCA		_	(14)	(60)	(45)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(0)	(0)	(0	, (0)	(0)	(0)	(0)	(0)
128 Installer Fees CCA		-	(19)	(37)	(18)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-
129 Internal Labour CCA		_	(13)	(07)	(10)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1) (0)	(0)	(0)	(0)	(0)
130 Internal Materials CCA		_	(0)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	(1)	()	, (0)	(0)	(0)	(0)	(0)
131 Training		_	(0)	(0)	_	_	_	_		_	(0)	_	_	_	_	_	_		(0)		_	_	_
132 Incremental ORM and Capitalized Overhead		_	_	0	0	0	1	1	1	1	1	1	2	2	2	2	2	2	2	3	3	3	3
133 Total TGW CCA	v-ref S4a, line 15		(37)	(109)	(74)	(2)	(2)	(2)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	0	1	(0	(1)	1	1	1	1
134	x 101 04a, into 10		(01)	(100)	()	(=)	()	(=)	(=)	(.)	(=)	(.)	(.)	(.)	(0)	0		(0	, (.,				
135 LICC Ending Balance																							
136 Hardware		-	5	6	4	3	2	5	3	2	2	1	4	3	2	1	1	4	. 3	2	1	1	4
137 Software		-	2	Ř		-	0	-	-	0	1			-				1	0				- '
138 Buildings		_	17	16	15	14	13	12	12	11	10	10	ä	9	8	8	7	7	. 6	6	6	5	5
139 Vonder Ecos		_	14	45	- 10		- 10				- 10	- 10		- 5	- 0		. '	. '					- 5
140 Installer Foos		_	19	18		_	_	_		_		_	_	_	_	_	_		_	_	_	_	_
141 Internal Labour		_	5	22	21	20	10	18	18	17	16	16	15	14	14	13	13	12	12	11	11	10	10
142 Internal Materials			4	22	21	20	- 15	- 10	- 10	- ''	10	- 10	- 15	- 14	- 14	- 15	- 13	12	10			- 10	- 10
143 Training			3	3	- 3	- 3	- 3	- 3	- 3	- 3	10	- 3	- 3	- 3	- 3	- 3	- 3		3	- 3	- 3	- 3	- 3
144 Incromontal ORM and Capitalized Overhead		-		(E)	(10)	(14)	(19)	(22)	(26)	(20)	(33)	(37)	(40)	(44)	(47)	(50)	(53)	57) (57	, so (eu)	(63)	(23)	(60)	3 (72)
145 Total UCC Ending Palance		<u> </u>	-	(3)	33	25	10	16	(20)	(30)	(33)	(37)	(40)	(44)	(47)	(30)	(33)	(37) (00)) (26)	(03)	(00)	(50)	(72)
146 Total OCC Enging Balance		-	69	112	33	25	19	10	9	3	0	(0)	(9)	(15)	(20)	(25)	(30)	(30	(20)	(41)	(45)	(50)	(50)
147 TGW Software CIAOC Addition		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Financial Schedule 5

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGI																							-
1 Revenue Requirement																							
2																							
3 Operating & Maintenance Expense															=								
4 CCE Customer Care O&M Costs	S2, line 6	-	-	39,624	40,676	41,928	43,223	44,560	45,538	46,362	47,725	48,713	49,600	50,756	51,923	53,095	54,314	55,801	(72,966)	58,262	59,609	(79,402)	62,366
Avoided Cosis- Existing customer care contract		-	-	(35,660)	(57,569)	(56,615)	(36,771)	(59,664)	2 477	2 409	(03,470)	(04,004)	(05,029)	(00,920)	(00,237)	(09,555)	(70,926)	(12,513)	(73,000)	(75,376)	2 760	(78,493)	(00,090)
7				(13,660)	(14 207)	(14 018)	(13,060)	(12,452)	(13,002)	(13 117)	(13 233)	(13 349)	(13 465)	(13 583)	(13 703)	(13,827)	(13,955)	(14 089)	(14 229)	(14.378)	(14 536)	(14 705)	(14,888)
8				(10,000)	(11,201)	(11,010)	(10,000)	(12,012)	(10,002)	(10,111)	(10,200)	(10,010)	(10,100)	(10,000)	(10,100)	(10,027)	(10,000)	(11,000)	(11,220)	(11,070)	(11,000)	(11,700)	(11,000)
9 Property & Other Taxes		-	-	-	44	(1)	85	57	52	38	20	2	(12)	(29)	(97)	(94)	(105)	(115)	(125)	(135)	(140)	(143)	(153)
10 Amortization & Depreciation Expense	line 19 + line 20	-	1,572	5,984	11,721	10,632	10,287	9,970	9,501	8,989	8,672	8,068	2,360	3,028	2,703	2,376	2,052	1,718	1,666	1,671	1,332	985	(867)
11 Income Tax Expense	line 29	-	155	2,150	4,278	3,830	3,629	3,391	3,123	2,906	2,741	2,515	671	837	735	623	506	330	259	310	200	83	(82)
12 Earned Return		-	2,284	5,106	6,348	5,057	4,056	3,136	2,246	1,346	610	(96)	531	170	(253)	(651)	(1,026)	(1,319)	(1,482)	(1,704)	(2,033)	(2,335)	(2,510)
13																							
14 TGI Total Cost of Service	x-ref S6, line 33	-	4,012	(420)	8,184	5,500	4,997	3,683	1,919	164	(1,190)	(2,860)	(9,915)	(9,576)	(10,615)	(11,573)	(12,527)	(13,475)	(13,911)	(14,235)	(15,175)	(16,115)	(18,501)
15																							
10 17 Income Tax Expense Calculation																							
18 Equity Earned Return			932	2 009	2 465	1 963	1 575	1 218	872	523	237	(37)	206	66	(98)	(253)	(398)	(512)	(575)	(662)	(789)	(907)	(975)
19 Add: Depreciation Expense	S3b. line 165	-		3,555	9,295	8,209	7,866	7,553	7.086	6.578	6.264	6.523	819	1.490	1.168	845	524	193	145	154	(181)	(525)	(867)
20 Add: Amortization Expense	S3b, line 206	-	-	860	860	860	860	860	860	860	860			-			-	-	-	-	()	((
21 Less: CCA	S4a, line 3	-	(501)	(949)	(801)	(544)	(346)	(376)	(379)	(179)	(85)	105	26	(14)	156	289	397	304	190	410	533	631	532
22 Less: Overhead Capitalized timing difference		-	-	976	1,015	1,001	933	919	929	937	945	953	962	970	979	988	997	1,006	1,016	1,027	1,038	1,050	1,063
23 Taxable Income After Tax		-	431	6,451	12,833	11,489	10,888	10,174	9,368	8,719	8,222	7,544	2,012	2,512	2,204	1,869	1,519	991	776	929	600	250	(246)
24																							
25 Taxable Income		-	587	8,601	17,111	15,319	14,517	13,565	12,490	11,625	10,962	10,059	2,683	3,349	2,939	2,492	2,026	1,322	1,035	1,239	801	333	(327)
26 07 Ourset la serie Tau Data		000/	070/	050/	050/	050/	050/	050/	050/	05%	05%	050/	050/	050/	05%	050/	050/	050/	050/	050/	050/	050/	050/
27 Current Income Lax Rate		29%	21%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
20 Income Tay Expense		-	155	2 150	4 278	3 830	3 629	3 301	3 1 2 3	2 906	2 7/1	2 5 1 5	671	837	735	623	506	330	250	310	200	83	(82)
30			100	2,100	4,270	3,000	0,020	0,001	5,125	2,500	2,741	2,010	0/1	007	755	025	500	550	200	510	200	00	(02)
31 Customer Impact- Residential																							
32 (95 GJ annual use)																							
33 Approximate Annual Bill- Burner Tip Increase/(Decrease) %				-0.01%	0.67%	0.46%	0.41%	0.31%	0.16%	0.02%	-0.10%	-0.23%	-0.76%	-0.74%	-0.83%	-0.91%	-0.99%	-1.07%	-1.11%	-1.14%	-1.21%	-1.29%	-1.46%

		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGVI	-																						
34 Revenue Requirement 35																							
37 CCE Customer Care O&M Costs	S2, line 6	-	-	4,791	5,003	5,245	5,495	5,764	5,994	6,209	6,503	6,753	6,996	7,284	7,582	7,889	8,211	8,583	8,909	9,277	9,657	10,053	10,460
38 Avoided Costs- Existing customer care contract		-	-	(6,758)	(7,083)	(7,333)	(7,472)	(7,747)	(8,031)	(8,300)	(8,649)	(8,956)	(9,257)	(9,605)	(9,964)	(10,334)	(10,722)	(11,162)	(11,560)	(12,002)	(12,461)	(12,939)	(13,432)
40 41			-	(1,652)	(1,747)	(1,754)	(1,660)	(1,665)	(1,711)	(1,757)	(1,803)	(1,851)	(1,899)	(1,949)	(2,001)	(2,054)	(2,109)	(2,167)	(2,227)	(2,289)	(2,355)	(2,424)	4/0
42 Property & Other Taxes		-	-	-	1	(12)	5	12	11	9	6	3	0	(8)	(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)
43 Amortization & Depreciation Expense lin	ine 52 + line 53	-	187	760	1,578	1,539	1,500	1,464	1,412	1,352	1,314	812	40	43	42	36	32	26	29	23	17	8	(251)
44 Income Tax Expense 45 Earned Return	line 62	-	(473) 306	(1,100) 730	(325) 952	581 798	549 648	513 508	475 371	441 231	405 114	227 18	(7) 140	(11) 116	(7) 84	(8) 51	(9) 18	(28) (7)	(34) (12)	(23) (28)	(22) (66)	(26) (103)	(35) (123)
46 47 TGVI Total Cost of Service x	k-ref S6, line 50		19	(1.262)	458	1.152	1.041	831	557	276	36	(791)	(1.726)	(1.809)	(1.899)	(1.993)	(2.088)	(2.196)	(2.265)	(2.339)	(2,449)	(2.568)	(434)
48 49				(.)==-/		.,	.,					(101)	(.,.=0)	(1,000)	(1,000)	(.,)	(2,000)	(_,)	(=,===)	(_)000/	(_,,	(_)	(10.1)
50 Income Tax Expense Calculation																							
51 Equity Earned Return		-	148	349	451	378	307	241	176	109	54	8	66	55	40	24	8	(3)	(6)	(13)	(31)	(49)	(58)
52 Add: Depreciation Expense	S3b, line 377	-	-	468	1,282	1,241	1,199	1,160	1,105	1,042	1,001	598	(177)	(177)	(182)	(191)	(199)	(209)	(209)	(218)	(229)	(240)	(251)
53 Add. Antonization Expense	S/12 line 9	-	(1.461)	(4 330)	(2 936)	(103)	(81)	(85)	(81)	(58)	(71)	(58)	(45)	(50)	(20)	(4)	14	(26)	(46)	-	26	30	25
55 Less: Overhead Capitalized timing difference	044, 1110 5	-	(1,401)	118	125	125	119	119	122	125	129	132	136	139	143	147	151	155	159	164	168	173	178
56 Taxable Income After Tax 57		-	(1,313)	(3,301)	(976)	1,743	1,646	1,538	1,425	1,322	1,215	680	(21)	(33)	(20)	(24)	(27)	(83)	(102)	(68)	(66)	(77)	(106)
58 Taxable Income 59		-	(1,786)	(4,402)	(1,301)	2,324	2,194	2,050	1,899	1,762	1,620	907	(28)	(44)	(26)	(32)	(36)	(111)	(136)	(90)	(88)	(103)	(142)
60 Current Income Tax Rate 61		29%	27%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
62 Income Tax Expense 63 64		-	(473)	(1,100)	(325)	581	549	513	475	441	405	227	(7)	(11)	(7)	(8)	(9)	(28)	(34)	(23)	(22)	(26)	(35)
65 Customer Impact- Residential																							
 66 (59 GJ annual use) 67 Approximate Annual Bill- Burner Tip Increase/(Decrease) % 				-0.49%	0.19%	0.46%	0.41%	0.33%	0.23%	0.10%	0.01%	-0.31%	-0.67%	-0.69%	-0.74%	-0.77%	-0.82%	-0.86%	-0.90%	-0.92%	-0.96%	-1.01%	-1.14%

	Г	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
TGW	-																						
68 Revenue Requirement																							
70 Operating & Maintenance Expense	S2 line 6			110	122	107	121	126	140	142	1/10	152	156	160	165	170	175	190	195	100	106	202	207
72 Avoided Costs- Existing customer care contract	32, 1110 0			(168)	(173)	(177)	(179)	(183)	(188)	(192)	(107)	(202)	(206)	(212)	(217)	(222)	(228)	(235)	(240)	(246)	(253)	(250)	(266)
73 Less: Overhead Capitalized		-	-	(100)	(175)	(177)	(173)	(103)	(100)	(132)	(137)	(202)	(200)	(212)	(217)	(222)	(220)	(200)	(240)	(240)	(200)	(200)	(200)
74	-	-	-	(41)	(43)	(42)	(40)	(39)	(40)	(41)	(41)	(42)	(42)	(43)	(44)	(44)	(45)	(46)	(46)	(47)	(48)	(49)	(49)
75				· · /	(-)	()	(-)	()	(- /	()	()	``'	()	(-)	. ,	()	(-)	,	(-)	()	(-)	(-)	(-)
76 Property Taxes		-	-	-	0	(0)	0	0	0	0	0	0	0	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(1)
77 Amortization & Depreciation Expense line	e 86 + line 87	-	5	19	40	39	38	37	35	34	33	20	1	1	1	1	1	1	1	0	0	0	(5)
78 Income Tax Expense	line 96	-	(12)	(28)	(9)	14	14	13	12	11	10	6	(0)	(0)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
79 Earned Return		-	8	18	23	19	16	12	9	6	3	1	3	3	2	1	0	(0)	(0)	(1)	(1)	(2)	(2)
80																							
81 TGW Total Cost of Service x-re	ref S6, line 67	-	0	(32)	12	30	28	23	17	10	5	(15)	(39)	(40)	(41)	(43)	(44)	(46)	(47)	(48)	(49)	(51)	(58)
82																							
83 Ada Jacoba Tau Fundada Oslaulation																							
64 Income Tax Expense Calculation 65 Equity Earned Pature			4		10	0	7	6	4	2	1	0	1	1	1	1	0	(0)	(0)	(0)	(1)	(1)	(1)
86 Add: Depreciation Expense St	33h line 580		4	12	32	31	30	20	28	27	26	15	(4)	(4)	(4)	(4)	(4)	(0)	(0)	(0)	(1)	(1)	(1)
87 Add: Amortization Expense S	S3b line 630		-	3	3	3	3	3	3	3	3		()	(4)	(4)	(4)	(-)	()	(-)	(3)	(3)	(0)	(3)
88 Less: CCA S	S4a, line 15	-	(37)	(109)	(74)	(2)	(2)	(2)	(2)	(1)	(2)	(1)	(1)	(1)	(0)	0	1	(0)	(1)	1	1	1	1
89 Less: Overhead Capitalized timing difference	,	-	(=-)	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	4
90 Taxable Income After Tax	-	-	(33)	(84)	(26)	43	41	38	36	33	31	18	(0)	(1)	(0)	(0)	(0)	(1)	(2)	(1)	(1)	(1)	(1)
91			. ,	. ,	. ,									. ,	.,	()	. ,	. ,	,	. ,	. ,	. ,	. ,
92 Taxable Income			(45)	(112)	(34)	58	55	51	48	44	41	24	(0)	(1)	(0)	(0)	(0)	(2)	(2)	(1)	(1)	(1)	(2)
93 94 Current Income Tax Rate		29%	27%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%	25%
95																							
96 Income Tax Expense		-	(12)	(28)	(9)	14	14	13	12	11	10	6	(0)	(0)	(0)	(0)	(0)	(0)	(1)	(0)	(0)	(0)	(0)
97 98 Customer Impact- Residential																							
99 (90 GJ annual use) 100 Approximate Annual Bill- Burner Tip Increase/(Decrease) %				-0.44%	0.17%	0.43%	0.40%	0.33%	0.24%	0.15%	0.07%	-0.22%	-0.54%	-0.56%	-0.58%	-0.60%	-0.63%	-0.65%	-0.67%	-0.68%	-0.71%	-0.73%	-0.82%

1 Consolidated Project Discounted Cash Flow																							
2	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
3 Capital Spending- Hardware		(731)	(2,500)					(1,400)		-	-		(1,400)					(1,400)		-			(1,400)
4 Capital Spending- Software		(27,890)	(50,944)	(10,009)		-	(60)	-	-	(60)	(450)	-	(60)			(60)		(450)	(60)	-	-	(60)	-
5 Capital Spending- Buildings & Structures		(1,742)	(7,072)	(188)	-	-	-	-	-	-	(3,600)	-			-		-	-	(3,600)			-	
6 Capital Expenditure Cash Flow	S1, line 16	(30,363)	(60,516)	(10,197)	-	-	(60)	(1,400)	-	(60)	(4,050)	-	(1,460)	-	-	(60)	-	(1,850)	(3,660)	-		(60)	(1,400)
7																							
8 Revenue Requirement	line 33 + 50 + 67	-	4,502	(1,367)	8,959	6,944	6,281	4,706	2,609	513	(1,142)	(3,719)	(11,387)	(11,267)	(12,439)	(13,536)	(14,633)	(15,739)	(16,296)	(16,749)	(17,857)	(18,978)	(21,490)
9 Incremental O&M	line 34 + 51 + 68	(77)	(10,001)	18,277	19,045	18,826	17,572	17,353	17,564	17,754	17,949	18,144	18,341	18,542	18,747	18,959	19,177	19,407	19,646	19,897	20,164	20,450	20,756
10 Property Tax 1% in Lieu	line 35 + 52 + 69	-	-	-	(45)	14	(90)	(69)	(63)	(47)	(26)	(5)	11	37	114	113	124	135	146	157	163	167	179
11 Operating & Other Expense Cash Flow		(77)	(5,498)	16,911	27,959	25,783	23,763	21,989	20,111	18,220	16,780	14,420	6,966	7,311	6,422	5,535	4,669	3,803	3,496	3,306	2,471	1,639	(555)
12 Tax Expense Cash Flow	line 37 + 54 + 71	22	1,457	(4,228)	(6,990)	(6,446)	(5,941)	(5,497)	(5,028)	(4,555)	(4,195)	(3,605)	(1,741)	(1,828)	(1,605)	(1,384)	(1,167)	(951)	(874)	(827)	(618)	(410)	139
13 After Tax Operating & Other Expense Cash Flow		(55)	(4,041)	12,683	20,969	19,337	17,823	16,492	15,083	13,665	12,585	10,815	5,224	5,484	4,816	4,151	3,502	2,852	2,622	2,480	1,853	1,229	(416)
14																							
15 Terminal Value Cash Flow		-	-	-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-		-	
16																							
17 Annual Cash Flow		(30,417)	(64,557)	2,486	20,969	19,337	17,763	15,092	15,083	13,605	8,535	10,815	3,764	5,484	4,816	4,091	3,502	1,002	(1,038)	2,480	1,853	1,169	(1,816)
18																							
19 Annual Discounted Cash Flow (mid year)		(29,578)	(58,896)	2,133	16,733	14,449	12,440	9,906	9,280	7,846	4,612	5,494	1,798	2,454	2,020	1,608	1,289	348	(332)	750	524	307	(455)
20																							
21 Total Project Discounted Cash Flow		4,729																					

22 <u>Te</u>	erasen Gas Inc.																							
24		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
25 As	ssumptions		, <u> </u>																					
26	Tax Rate		28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
27 I	Inflation		2.00%																					
28 (Cost of Capital																							
29 1	Nominal WACC Pre-Tax		6.77%	7.40%	7.68%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%	7.79%
30 1	Nominal WACC Post-Tax		5.68%	6.23%	6.50%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%
31 F	Real WACC Pre-Tax		4.67%	5.30%	5.57%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%	5.68%
32 F	Real WACC Post-Tax		3.61%	4.14%	4.41%	4.49%	4.49%	4.49%	4.49%	4.49%	4.49%	4.49%	4,49%	4.49%	4.49%	4.49%	4.49%	4.49%	4.49%	4,49%	4.49%	4.49%	4.49%	4.49%
33 (CCA Rates																							
34	Hardware		30%																					
35	Software		100%																					
36	Meters		6%																					
37	Overhead Capitalized		4%																					
30	Overhead Capitalized UCC Addition Ratio		62.5% (10/16)																				
31	Overhead Capitalized Rate		16%	,																				
32 F	Proiect Inservice Year		2011 & 2012																					
33	· · · · · · · · · · · · · · · · · · ·																							
34 Di	scounted Cash Flow Analysis																							
35																								
36	Capital Spending- Hardware		(653)	(2.228)	-	-	-	-	(1.236)	-	-		-	(1.224)	-	-		-	(1.210)	-		-	-	(1.196)
37	Capital Spending- Software		(24,905)	(45,410)	(8,905)	-	-	(53)	-	-	(53)	(395)	-	(52)	-	-	(52)	-	(389)	(52)		-	(51)	-
38	Capital Spending- Buildings & Structures		(1.555)	(6,303)	(167)	-	-	-	-	-	-	(3,160)	-	-	-	-	· · ·	-	-	(3,104)		-	-	
31	Capital Expenditure Cash Flow	S3b, line 12 + 25 (2010 only)	(27,114)	(53,942)	(9,073)	-	-	(53)	(1,236)	-	(53)	(3,555)	-	(1,276)	-	-	(52)		(1,599)	(3,156)	-	-	(51)	(1,196)
32			,	,				. ,	,			,		,			. ,		,				. ,	,
33	Revenue Requirement	S5. line 14		4,432	(111)	8.456	5.732	5.188	3.832	2.022	219	(1.184)	(2.907)	(9.659)	(9.439)	(10.514)	(11.510)	(12,504)	(13.495)	(13.974)	(14.344)	(15.333)	(16.323)	(18.501)
34	Incremental O&M	S5, line 4 + 5	(68)	(8,914)	16,262	16,913	16,688	15,548	15,324	15,479	15,615	15,753	15,891	16,029	16,170	16,313	16,460	16,613	16,773	16,940	17,116	17,304	17,506	17,724
35	Property Tax 1% in Lieu	S5, line 9	-	-		(44)	1	(85)	(57)	(52)	(38)	(20)	(2)	12	29	97	94	105	115	125	135	140	143	153
36	Operating & Other Expense Cash Flow		(68)	(4,483)	16,151	25,325	22,421	20,651	19,098	17,449	15,796	14,549	12,982	6,382	6,760	5,896	5,045	4,214	3,393	3,090	2,907	2,111	1,326	(623)
37	Tax Expense Cash Flow	line 36 x line 26	19	1,188	(4,038)	(6,331)	(5,605)	(5,163)	(4,775)	(4,362)	(3,949)	(3,637)	(3,246)	(1,596)	(1,690)	(1,474)	(1,261)	(1,053)	(848)	(773)	(727)	(528)	(332)	156
38	After Tax Operating & Other Expense Cash Flow		(49)	(3,295)	12,114	18,994	16,816	15,488	14,324	13,087	11,847	10,912	9,737	4,787	5,070	4,422	3,783	3,160	2,545	2,318	2,180	1,583	995	(467)
39																								
32	Terminal Value Cash Flow		-	-	-		-	-	-	-			-	-	-	-		-	-	-	-	-	-	
33																								
34	Annual Cash Flow		(27,162)	(57,237)	3,041	18,994	16,816	15,435	13,087	13,087	11,794	7,357	9,737	3,511	5,070	4,422	3,731	3,160	946	(838)	2,180	1,583	943	(1,663)
35			-																					
36	Annual Discounted Cash Flow (mid year)		(26,422)	(52.279)	2,598	15.195	12.621	10.870	8.647	8.112	6.860	4.015	4,985	1.686	2.285	1.870	1.480	1.176	330	(275)	670	457	255	(422)
37			()	(, ,=, =)	,	.,	,	.,	.,	.,=	.,	,	,	,	,	,	,	,		(=)				()
38	Total Project Discounted Cash Flow		4,714																					

Customer Care Enhancement Project Discounted Cash Flow in \$000s

Note-the revenue requirement and tax expense amount showing in 2011 are for financial model purposes only; as requested in the CPCN Application from June 2, 2009, all costs prior to January 1, 2012 will be captured in an AFUDC earning non-rate base deferral account.

39 Terasen Gas (Vancouver Island) Inc. 40 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 41 Reference 2010 2011 2012 2028 2029 2030 2031 42 Assumptions 42 Assumptions 43 Tax Rate 44 Inflation 45 Cost of Capital 28.50% 26.50% 25.00\% 25.00\% 25. 2.00% 46 Nominal WACC Pre-Tax 47 Nominal WACC Post-Tax 8.49% 7.34% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 8.59% 7.42% 7.42% 8.12% 8.59% 8.59% 8.59% 8.59% 8.59% 8 59% 8.59% Nominal WACC Post-Tax 7.42% 7.42% 6.35% 7.42% 7.42% 7.42% 7.42% 7.42% 6.97% 48 Real WACC Pre-Tax 5.31% 6.00% 6.36% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 6.46% 49 Real WACC Post-Tax 4 26% 5 31% 5 31% 5 31% 4 88% 5 24% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 5 31% 50 51 Discounted Cash Flow Analysis 52 53 Capital Spending- Hardware (76) (265) (160) (173) (186) (201) (1,077) 54 55 Capital Spending- Software Capital Spending- Buildings & Structures (7) (7) (54) (2,910) (5,398)(7) (8) (60) (8) (8) (749) (431) (182) (20) (486) 48 49 Capital Expenditure Cash Flow S3b, line 224 + 237 (2010 only) (3,168) (6,412) (1,097) (7) (160) (7) (484) (180) (8) (246)(494) (8) (201) Revenue Requirement Incremental O&M S5, line 47 S5, line 37 + 38 69 (1,225) 491 1,181 1,065 851 571 283 37 (797) (1,690) (1,789) 2,321 (1,884) (1,983) (2,085) (2,199) (2,275) (2,356) (2,474) (2,602) (2,931) 50 51 52 53 54 55 56 2,203 (8) (1,060) 1,966 2.080 2,088 1,977 1.982 2,037 2,091 2.146 2,261 2,382 2,446 2,511 2,580 2,651 2,725 2,803 2,886 2,973 Property Tax 1% in Lieu S5, line 42 (1) 12 (5) (12) (11) (9) (6 (3) (0) 17 18 19 20 2 23 24 25 Operating & Other Expense Cash Flow Tax Expense Cash Flow 3.037 2.177 (8) (990)742 3,281 2.821 2.597 2.366 1.403 539 480 446 401 397 39 352 307 66 line 53 x line 43 (705) (591) (77) (17) (185) (820) (759) (649) (544) (351) (143) (135) (129) (120) (111) (100) (98) (88) 262 (643) (99) After Tax Operating & Other Expense Cash Flow (728) 556 2.461 2,278 2,116 1,948 1,774 1,633 1,052 428 40 38 36 30 298 20 264 230 50 49 Terminal Value Cash Flow 50 51 Annual Cash Flow (3,174) (7,140) (541) 1,928 2,461 2,271 1,948 1,767 1,149 248 405 334 294 264 (151) 1,956 1,052 386 352 55 (196) 222 52 53 Annual Discounted Cash Flow (mid year) (3,078) (6,453) (453) 1,501 1,783 1,532 1,228 1,139 962 582 496 109 165 147 125 110 17 (56) 78 65 51 (32) 54 55 Total Project Discounted Cash Flow 18
Customer Care Enhancement Project Discounted Cash Flow in 5000s * Note: the revenue requirement and tax expense amount showing in 2011 are for financial model purposes only; as requested in the CPCN Application from June 2, 2009, all costs prior to January 1, 2012 will be captured in an AFUDC earning non-rate base deferral account.

56 1	Ferasen Gas (Whistler) Inc.																							
57																								
58		Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
59 A	Assumptions	-																						
60	Tax Rate		28.50%	26.50%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
61	Inflation		2.00%																					
62	Cost of Capital																							
63	Nominal WACC Pre-Tax		7.34%	7.92%	8.18%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%	8.28%
64	Nominal WACC Post-Tax		6.27%	6.77%	7.03%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%	7.11%
65	Real WACC Pre-Tax		5.23%	5.81%	6.06%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%	6.16%
66	Real WACC Post-Tax		4.19%	4.68%	4.93%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%	5.01%
67																								
68 I	Discounted Cash Flow Analysis																							
69																								
70	Capital Spending- Hardware		(2)	(7)	-	-	-	-	(4)	-	-	-	-	(4)	-	-			(4)	-			-	(4)
71	Capital Spending- Software		(74)	(136)	(27)	-	-	(0)	-	-	(0)	(1)	-	(0)	-	-	(0)		(1)	(0)		-	(0)	
72	Capital Spending- Buildings & Structures		(5)	(19)	(1)	-	-	-	-	-	-	(10)	-	-	-	-	-		-	(10)		-	-	
65	Capital Expenditure Cash Flow	S3b, line 436 + 449 (2010 only)	(81)	(162)	(27)	-	-	(0)	(4)		(0)	(11)	-	(4)	-	-	(0)		(5)	(10)		-	(0)	(4)
66			. ,	. ,	. ,				. ,		. ,	. ,		. ,			. ,			. ,			. ,	
67	Revenue Requirement	S5, line 81	-	1	(31)	12	30	28	23	17	11	5	(15)	(38)	(40)	(41)	(43)	(44)	(46)	(47)	(48)	(50)	(52)	(58)
68	Incremental O&M	S5, line 71 + 72	(0)	(27)	49	51	51	47	47	48	48	49	50	50	51	52	53	53	54	55	56	57	58	59
69	Property Tax 1% in Lieu	S5, line 76	-	-	-	(0)	0	(0)	(0)	(0)	(0)	(0)	(0)	(0)	0	0	0	0	0	0	0	0	0	1
70	Operating & Other Expense Cash Flow	· · ·	(0)	(25)	18	63	81	75	70	64	59	54	34	13	12	11	10	10	9	8	8	7	6	2
71	Tax Expense Cash Flow	line 70 x line 60	0	7	(4)	(16)	(20)	(19)	(17)	(16)	(15)	(13)	(9)	(3)	(3)	(3)	(3)	(2)	(2)	(2)	(2)	(2)	(2)	(0)
72	After Tax Operating & Other Expense Cash Flow	-	(0)	(19)	13	47	61	56	52	48	44	40	26	9	9	8	8	7	6	6	6	5	5	1
73				. ,																				
66	Terminal Value Cash Flow		-	-	-	-	-	-	-	-	-	-	-	-	-	-			-	-		-		
67																								
68	Annual Cash Flow		(81)	(180)	(14)	47	61	56	49	48	44	29	26	5	9	8	8	7	1	(4)	6	5	5	(3)
69		-	X- /	1.00	()																			(-7
70	Annual Discounted Cash Flow (mid year)		(79)	(163)	(12)	37	45	39	31	29	24	15	13	2	4	3	3	2	0	(1)	2	1	1	(1)
71	/ Initial Diocoanioa Casir Fiow (inita your)		(70)	(100)	(12)	0,	10	00	0.	20	2.	10	10	-		0		-	0	(.)	-			(.)
72	Total Project Discounted Cash Flow		(3)																					
12	Total Troject Discounted OdSIT FIOW		(3)																					

Financial Schedule 7 Customer Care Enhancement Project

Cost	Per	Customer	Analysis	

	Reference	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
1 Gas Segment																							
2 3 Customer Care Costs (\$000's)																							
4 CCE Customer Care O&M	\$2, line 6	-	-	44,534	45,801	47,300	48,850	50,461	51,672	52,715	54,376	55,618	56,752	58,201	59,670	61,153	62,699	64,564	66,021	67,729	69,462	71,242	73,033
5 CCE other Cost of Service	line 16 + 27 +38	-	4,502	16,911	28,004	25,770	23,853	22,059	20,174	18,267	16,807	14,425	6,954	7,274	6,308	5,422	4,544	3,668	3,350	3,149	2,308	1,472	(734)
6 Total Customer Care Costs		-	4,502	61,445	73,805	73,070	72,703	72,519	71,846	70,982	71,182	70,043	63,706	65,475	65,978	66,576	67,243	68,231	69,370	70,878	71,770	72,713	72,299
8 Average Customers 9		943,278	951,379	959,757	968,338	977,113	987,030	996,311	1,005,709	1,015,228	1,024,868	1,034,633	1,044,524	1,054,543	1,064,694	1,074,979	1,085,399	1,095,957	1,106,657	1,117,500	1,128,490	1,139,628	1,150,918
10 Cost Per Customer		\$-	\$ 4.73 \$	64.02 \$	76.22 \$	5 74.78	\$ 73.66	\$ 72.79	\$71.44 \$	69.92	69.46	\$ 67.70	\$ 60.99	\$ 62.09 \$	61.97	\$ 61.93	\$ 61.95	\$ 62.26	\$ 62.68	\$ 63.43	\$ 63.60	\$ 63.80	\$ 62.82
11 12 TGI																							
13 14 TGL Curtomor Core Corte (\$000'r)																							
15 TGI CCE Customer Care O&M	S5. line 4			39.624	40.676	41.928	43.218	44.554	45.532	46.356	47,718	48,706	49.592	50,749	51.915	53.087	54.305	55,792	56.918	58.253	59.600	60.977	62.355
16 TGI CCE other Cost of Service	S5, line 14 - (S5, line 4 + S5, line 5)	-	4,432	16,151	25,369	22,420	20,736	19,155	17,501	15,834	14,569	12,985	6,370	6,731	5,799	4,950	4,109	3,278	2,965	2,772	1,972	1,183	(776)
17 TGI Total Customer Care Costs		-	4,432	55,775	66,045	64,348	63,953	63,710	63,033	62,190	62,287	61,690	55,963	57,480	57,714	58,037	58,414	59,070	59,883	61,024	61,571	62,160	61,579
18 19 TGI Average Customers		842,337	848,033	853,935	859,977	866,135	873,338	879,808	886,327	892,893	899,508	906,173	912,886	919,649	926,463	933,327	940,241	947,207	954,225	961,294	968,416	975,591	982,819
21 TGI Cost Per Customer		s -	\$ 5.23 \$	65.32 \$	76.80 \$	74.29	\$ 73.23	\$ 72.41	\$ 71.12 \$	69.65	69.25	\$ 68.08	\$ 61.30	\$ 62.50 \$	62.30	\$ 62.18	\$ 62.13	\$ 62.36	\$ 62.76	\$ 63.48	\$ 63.58	\$ 63.71	\$ 62.66
22 23 TGVI																							
24																							
25 TGVI Customer Care Costs (\$000's)																							
26 TGVI CCE Customer Care O&M	S5, line 37	-	-	4,791	5,003	5,245	5,501	5,770	6,000	6,215	6,509	6,760	7,003	7,292	7,590	7,897	8,219	8,591	8,918	9,286	9,667	10,063	10,470
27 I GVI CCE other Cost of Service 28 TGVI Total Customer Care Costs	55, line 47 - (55, line 37 + 55, line 38)		69	5 533	2,571	3,269	3,042	2,833	2,608	2,374	2,183	1,406	7 575	7 823	498	462 8 359	8 645	381	9 204	369	9 0 0 0	283	41
29																							
30 IGVI Average Customers 31		98,430	100,805	103,258	105,770	108,356	111,036	113,812	116,657	119,573	122,563	125,627	128,768	131,987	135,286	138,669	142,135	145,689	149,331	153,064	156,891	160,813	164,833
32 TGVI Cost Per Customer 33		\$-	\$ 0.69 \$	5 53.58 \$	71.61 \$	78.58	\$ 76.94 \$	\$ 75.59	\$ 73.79 \$	5 71.83 \$	70.92	\$ 65.00	\$ 58.82	\$ 59.27 \$	59.78	\$ 60.28	\$ 60.83	\$ 61.59	\$ 62.24	\$ 63.08	\$ 63.71	\$ 64.34	\$ 63.77
34 TGW																							
36 TGW Customer Care Costs (\$000's)																							
37 TGW CCE Customer Care O&M	S5, line 71	-	-	119	123	127	132	136	140	143	149	152	156	161	165	170	175	180	185	191	196	202	207
38 TGW CCE other Cost of Service	S5, line 81 - (S5, line 71 + S5, line 72)		1	18	63	81	75	70	65	59	54	35	13	12	11	10	9	8	8	8	7	6	1
39 TGW Total Customer Care Costs		-	1	137	186	208	207	207	205	202	203	187	169	172	176	180	184	189	193	198	203	208	208
40 41 TGW Average Customers		2,511	2,541	2,564	2,591	2,622	2,656	2,691	2,726	2,761	2,797	2,833	2,870	2,907	2,945	2,984	3,022	3,062	3,101	3,142	3,183	3,224	3,266
42 43 TOW Cost Per Customer				E2 07 6	74 74 8	70.20	* 77.00	* 70 77		73.06	70.44	¢ 65.00	¢ 50.77	¢ 50.00 0	E0.7E	¢ 60.07	* * * * * *	e e1 e2	¢ 60.05	e e2 40	¢ 63.75	e e4 20	e er er
43 TOW COSt Per Customer		ə -	ə 0.59 i) <u> </u>	/1./4 3	9 19.29	\$ 77.90 3	\$ 10.11	ə 75.11 a) /3.20 3	72.44	\$ 65.99	\$ 30.77	ə 59.22 q	5 59.75	\$ 60.27	\$ 60.64	\$ 01.02	\$ 62.25	\$ 63.10	\$ 63.75	\$ 64.39	\$ 03.03
45 46 Notes:																							
47 Other Cost of Service amounts equal to total cost	t of service as shown on subsequent Rev	enue Requiremen	t schedule (S5) le	ess O&M (net of C	CCE customer ca	are and avoided	costs)																
48																							
49 50 Levelized Cost Per Customer Calculation				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
51 52 Discount Rate (TGI) (Nominal After Tax WACC)				6.50%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%
53																							
54 Average Customers 55 Discounted Average Customers				959,757 901,183	968,338 852,404	977,113 806,998	987,030 764,835	996,311 724,339	1,005,709 686,007	1,015,228 649,724	1,024,868 615,379	1,034,633 582,868	1,044,524 552,092	1,054,543 522,959	1,064,694 495,378	1,074,979 469,268	1,085,399 444,550	1,095,957 421,147	1,106,657 398,991	1,117,500 378,013	1,128,490 358,151	1,139,628 339,344	1,150,918 321,537
56 57 CCE Total Customer Care Costs	line 6 x 1000			61 444 697	73 804 824	73 069 550	72 703 342	72 510 282	71 845 754	70 981 561	71 182 461	70 042 860	63 705 909	65 475 312	65 978 227	66 575 827	67 243 209	68 231 360	69 370 252	70 878 023	71 770 202	72 713 3/0	72 298 754
58 Discount Rate	S6, line 29			6.50%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%
59 Discounted Costs				57,694,776	64,968,591	60,348,222	56,336,747	52,723,016	49,006,896	45,426,679	42,741,306	39,459,176	33,672,333	32,469,861	30,698,194	29,062,848	27,541,012	26,219,488	25,010,528	23,975,658	22,777,836	21,651,689	20,198,438
60 Annual Levelized Cost Per Customer			\$	64.02 \$	76.22 \$	5 74.78	\$ 73.66 \$	\$ 72.79	\$ 71.44 \$	69.92	69.46	\$ 67.70	\$ 60.99	\$ 62.09 \$	61.97	\$ 61.93	\$ 61.95	\$ 62.26	\$ 62.68	\$ 63.43	\$ 63.60	\$ 63.80	\$ 62.82
61																							
63 Levelized Cost per Customer- CCE CPCN	761.983.296	Costs																					
64	11,285,168	Customers																					
65	\$ 67.52	Cost/Customer (\$)																					
66																							
68 Existing Customer Care Contract				62 895 962	65 503 539	66 750 509	67 018 529	68 376 757	69 766 031	70 965 666	72 789 021	74 194 145	75 063 022	76 714 241	78 385 889	80 081 489	81 846 725	83 942 324	85 639 192	87 600 751	89 601 929	91 667 270	93 765 601
69 Discount Rate	S6. line 29			6.50%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%	6.58%
70 Discounted Costs				59,057,473	57,661,171	55,129,318	51,931,669	49,711,314	47,588,291	45,416,506	43,705,960	41,797,834	39,675,243	38,043,357	36,471,202	34,958,572	33,522,180	32,256,800	30,876,076	29,632,396	28,437,122	27,295,555	26,195,731
71 Annual Levelized Cost Per Customer			\$	65.53 \$	67.65 \$	68.31	\$ 67.90 \$	\$ 68.63	\$ 69.37 \$	69.90	71.02	\$ 71.71	\$ 71.86	\$ 72.75 \$	73.62	\$ 74.50	\$ 75.41	\$ 76.59	\$ 77.39	\$ 78.39	\$ 79.40	\$ 80.44	\$ 81.47
72																							
73 74 Levelized Cost per Customer, Existing Contract	800 262 269 /	Costs																					
75	11,285.168	Customers																					
76	\$ 71.72	Cost/Customer (\$)																					
77																							

Customer Care Enhancement Project Levelized Cost of Service Per Customer



Appendix L CLIENT SERVICES AGREEMENT AND SCHEDULES

TABLE OF CONTENTS

1.	Definitions and Interpretations	2
2.	Drafting	7
3.	Term of Agreement	7
4.	CustomerWorks' Responsibilities	9
5.	BC Gas' Responsibilities	13
6.	Client Committee	13
7.	Data and Proprietary Interests	15
8.	Fees and Invoicing	16
9.	Alternative Delivery of Client Services	
10.	Force Majeure	20
11.	Insurance	22
12.	Representations and Warranties	23
13.	Indemnification and Limitation of Liability	25
14.	Indemnification for Infringement	
15.	Scope Change Process	29
16.	Internal Dispute Resolution	
17.	Mediation and Arbitration	32
18.	Early Termination	35
19.	Confidentiality	40
20.	Notices	41
21.	Amendments	42
22.	Subcontracting	42

23.	Records and rights to audit	42
24.	Recruitment and Solicitation	43
25.	Entire Agreement	43
26.	Time of the essence	43
27.	Precedence of Interpretation	43
28.	No Waiver	43
29.	Rights Cumulative	44
30.	Assigns and Successors	44
31.	Counterparts/Facsimile	44

CLIENT SERVICES AGREEMENT

THIS AGREEMENT (the "Client Services Agreement") effective the 1st day of January, 2002 (the "Effective Date").

BETWEEN:

BC GAS UTILITY LTD. 1111 West Georgia Street Vancouver, British Columbia V6E 4M4

(hereinafter referred to as the "BC Gas")

AND:

CUSTOMERWORKS LIMITED PARTNERSHIP 80 Allstate Parkway Markham, Ontario L3R 6H3

(hereinafter referred to as "CustomerWorks")

WHEREAS:

- A. CustomerWorks is in the business of providing customer contact, billing support, meter reading and credit and collection services (the "Client Services");
- B. BC Gas has requested and CustomerWorks has agreed to provide Client Services on the terms and conditions set out below;

NOW THEREFORE in consideration of the respective covenants, agreements, representations and warranties of the parties hereto and other good and valuable consideration (the receipt and sufficiency of which are hereby confirmed by each of the parties), the parties hereto hereby agree as follows:

1. **DEFINITIONS AND INTERPRETATIONS**

1.1 **Definitions**

For the purposes of this Client Services Agreement:

- (a) "**Abandonment Rate**" shall mean the number of callers that hang up prior to speaking to a Customer representative divided by the total number of calls and multiplied by 100;
- (b) "Activity Forecast" shall mean the planned volume for an activity as determined by BC Gas in accordance with the provisions hereof;
- (c) **"Additional Fees"** shall mean fees for Client Services not contemplated by this Client Services Agreement ("Additional Services") or fees arising from and agreed to through the Scope Change Process in Clause 15;
- (d) **"Affiliate"** has the meaning ascribed thereto in the Canada Business Corporation Act;
- (e) **"Asset Transfer Agreement"** shall mean the asset transfer agreement effective January 1, 2002 between BC Gas Inc. and CustomerWorks;
- (f) **"Base Fees"** shall mean the annual fees set out in each of the Schedules attached hereto, set out at the beginning of each Year based on the Activity Forecast;
- (g) **"Billing Support Services**" shall mean the billing, payment processing, customer accounting, and systems support services provided by CustomerWorks to BC Gas.
- (h) **"BC Gas**" or **"Company**" shall mean BC Gas Utility Ltd., including Squamish Gas Co. Ltd., its wholly owned subsidiary;
- (i) **"Business Day**" shall mean a day other than a Sunday and British Columbia statutory holiday;
- "Client Services" or "Services" shall mean the Billing Support, Customer Contact, Credit and Collection, Meter Services and Industrial and Off System Support Services to be provided by CustomerWorks to BC Gas hereunder;
- (k) "Client Services Agreement" shall mean this Client Services Agreement together with the Schedules attached hereto and forming a part hereof;
- (l) **"Consumer Price Index ("CPI")**" shall mean, as calculated by Statistics Canada, the rate of inflation indicated by the increase of the consumer price index reported as a percentage increase

in the index over a twelve month period, such period being a calendar year;

- (m) "Credit and Collection Services" shall mean the arrears notice, credit and collection, Customer contact, payment arrangement, skip tracing, service termination for non-payment, bankruptcy/receivership/orderly payment of debts, external referral, and bad debt collection services provided by CustomerWorks to BC Gas;
- (n) "Customer" shall mean a person who is being provided service or who has filed an approved application for service with BC Gas;
- (o) "**Customer Billing System**" shall mean the CustomerWorks' billing system used to bill BC Gas Customers for services provided by BC Gas;
- (p) "Customer Contact Services" shall mean the handling of Customer contact related to emergency service, meter orders, billing inquiries, payment/billing programs, Customer moves, Customer education, new gas service, and additional meter requests that is provided by CustomerWorks to BC Gas;
- (q) "**Customer Systems**" shall mean all systems used to bill and communicate with Customers;
- (r) "Data" shall mean the Customer data that is gathered and stored by CustomerWorks in conducting its Client Services business, including analyses or compilations prepared with such data;
- (s) **"Expedited Arbitration"** shall mean the arbitration of a dispute which requires quick resolution under Clause 18 which shall be carried out in accordance with the following process:

Where a dispute is to be submitted to Expedited Arbitration, one or both of the parties shall, within two (2) Business Days of deciding to submit the dispute to expedited arbitration, appoint a Nominated Arbitrator (as defined in Clause 18.1(a)) who shall be assigned the task of finally resolving the dispute between the parties within thirty (30) days from the date of his or her appointment.

In the event the parties cannot agree on the Nominated Arbitrator within two (2) Business Days, the parties shall refer the matter to Commercial Arbitration Rules of The Canadian Foundation for Dispute Resolution, or such other mediation or arbitration centre as may be mutually agreed upon in accordance with Clauses 15 and 16 of the Commercial Arbitration Rules of The Canadian Foundation for Dispute Resolution. The arbitration shall:

- to the extent possible, and with the necessary modifications as determined by the mediator, be administered in accordance with the Commercial Arbitration Rules of The Canadian Foundation for Dispute Resolution;
- (ii) be conducted in Vancouver, British Columbia, Canada; and
- (iii) be conducted in English.
- (t) **"Industrial**" shall mean the sale or delivery of gas to Customers billed under a rate schedule greater than 3;
- (u) "Meter Reading Management System" shall mean the system used by CustomerWorks to capture meter readings and transfer meter reading and related information between the Customer Billing System interfaces, systems and processes and the meter reading application to BC Gas;
- (v) "Meter Services" shall mean meter reading and related services, meter lock-offs / unlocks, meter relights and other meter order processing for meters and premises located in BC Gas' service areas as specifically set out in Schedule 'C' and the Protocol;
- (w) "**Off System**" shall mean the sale or delivery of gas to customers outside those areas where BC Gas provides service;
- (x) "Project Transfer Agreement" shall mean the agreement between BC Gas and CustomerWorks which determines the scope and schedule for the completion of the implementation of changes to the Peace "Energy" CIS to support BC Gas' repatriation of its lower mainland Customer base;
- (y) "Protocol" shall mean BC Gas' policies, procedures and schedules existing on the date hereof that will be documented by BC Gas in the Protocol document and need to be followed by CustomerWorks. Questions regarding the base Protocol document as prepared by BC Gas shall be submitted to the Client Committee (defined in Clause 6) for determination. If both parties agree to a change in the Protocol document then it will be revised so that it reflects the current policies, procedures and schedules to be followed by CustomerWorks;
- (z) **"Tariff**" shall mean the British Columbia Utilities Commission approved General Terms and Conditions and Rate Schedules, revised from time to time to reflect changes to both rates and

conditions of service. The Tariff shall include all BC Gas service areas including Lower Mainland, Inland, Columbia, Fort Nelson and Squamish; and

(aa) **"Third Party**" shall mean companies other than BC Gas and Squamish Gas Co. Ltd. that CustomerWorks provides services to on behalf of BC Gas according to a contract.

1.2 Headings and Table of Contents

The division of this Client Services Agreement into Clauses and Schedules and the insertion of headings and a table of contents are for convenience only and shall not affect the construction or interpretation of this Client Services Agreement.

1.3 Clause References

Unless otherwise specified, references in this Client Services Agreement to "Clauses", "Schedules", "Appendices" and "Attachments" are to Clauses of, Schedules to, Appendices to, and Attachments to this Client Services Agreement.

1.4 Interpretation

Unless the context otherwise necessarily requires, the following provisions will govern the interpretation of this Client Services Agreement:

- (a) the words "hereof", "herein" and "hereunder" and similar expressions refer to this Client Services Agreement as a whole and not to any particular provision of this Client Services Agreement;
- (b) each reference to "days" in this Client Services Agreement means calendar days, unless the term "Business Days" is used. Each reference to a time of day in this Client Services Agreement means that time in Vancouver, British Columbia, unless otherwise specified. In computation of periods of time in this Client Services Agreement from a specified date to a later specified date, the word "from" means "from and including" and the words "to" and "until" each means "to but excluding";
- (c) the words "include", "including" and similar expressions mean "including but not limited to";
- (d) the meanings given to terms defined in this Client Services Agreement apply to both the singular and plural forms of those terms;
- (e) except as otherwise specified in this Client Services Agreement, each reference in this Client Services Agreement to any

agreement (including a reference to this Client Services Agreement):

- (i) includes all schedules, exhibits, appendices, annexes or other attachments thereto; and
- (ii) refers to that agreement as it may be amended, supplemented or otherwise modified from time to time in accordance herewith or therewith as the case may be;
- (f) each reference in this Client Services Agreement to any person will be deemed to include that person's successors and permitted assigns;
- (g) all references in this Client Services Agreement to "Dollars" or "\$" are to lawful money of Canada unless otherwise indicated; and
- (h) where in this Client Services Agreement a term is defined, a derivative of that term will have a corresponding meaning.

1.5 **Statutory References**

Unless otherwise specified, each reference to a statute is deemed to be a reference to that statute and to the regulations made under that statute as amended or re-enacted from time to time.

1.6 Governing Law

This Client Services Agreement is governed exclusively by, and is to be enforced, construed and interpreted exclusively in accordance with, the laws of the Province of British Columbia and the laws of Canada applicable in British Columbia which shall be deemed to be the proper law of this Client Services Agreement.

1.7 Severability

Each provision of this Client Services Agreement is severable. If any provision of this Client Services Agreement is determined to be illegal, invalid or unenforceable in any jurisdiction, the illegality, invalidity or unenforceability of that provision shall not affect:

- (a) the legality, validity, or enforceability of the remaining provisions of this Client Services Agreement; or
- (b) the legality, validity or enforceability of that provision in any other jurisdiction;

except that if:

(c) on the reasonable construction of this Client Services Agreement as a whole, the applicability of the other provisions presumes the validity and enforceability of the particular provision, the other provisions shall be deemed also to be invalid or unenforceable; and

(d) as a result of the determination by a court of competent jurisdiction that any part of this Client Services Agreement is unenforceable or invalid and, as a result of this Clause 1.7, the basic intentions of the parties to this Client Services Agreement are entirely frustrated the parties shall use commercially reasonable efforts to amend, supplement or otherwise vary this Client Services Agreement to confirm their mutual intention in entering into this Client Services Agreement.

1.8 Schedules

The following schedules ("Schedules") are annexed hereto and form part of this Client Services Agreement and all commitments made under the Client Services Agreement are commitments to perform obligations under the Client Services Agreement including the Schedules:

Schedule "A" -	Customer Contact Services
Schedule "B" -	Billing Support Services
Schedule "C" -	Meter Reading Services
Schedule "D" -	Credit and Collection Services
Schedule "E" -	Industrial and Off System Support Services

2. **DRAFTING**

This Client Services Agreement has been negotiated and approved by the parties and, notwithstanding any rule or maxim of law or construction to the contrary, any ambiguity or uncertainty will not be construed against either of the parties by reason of the authorship of any of the provisions of this Client Services Agreement.

Each party to this Client Services Agreement has co-operated in the drafting and preparation of this Client Services Agreement. Thus, in any construction to be made of this Client Services Agreement, the same will not be construed against any party.

3. **TERM OF AGREEMENT**

3.1 **Commencement**. The term of this Client Services Agreement will commence on January 1, 2002 and continue for a period of five (5) years (the "Term").

3.2 **Renewal and Renewal Process.**

- (a) This Client Services Agreement shall automatically be renewed for additional terms, each being of one year (an "Additional Term"), unless otherwise agreed to, at prices determined by either:
 - (i) the process set out in Clause 3.2(b) below; or
 - (ii) if BC Gas elects not to issue a Request for Quotation (as defined in paragraph (b) below) the parties agree that any increase in prices for the Client Services for any Additional Term shall not exceed a percentage increase equal to one half (¹/₂) of the annual CPI for each specific Additional Term based on the CPI from the previous calendar year.
- (b) At the end of the fourth year of the Term or the sixth month of any Additional Term, as the case may be, BC Gas may, in its sole and absolute discretion, elect to issue a request for quotation to third parties for the provision of the Client Services (a "Request for Quotation"). CustomerWorks shall have the option of matching the quotation chosen by BC Gas from the responses to the Request for Quotation and where CustomerWorks matches such quotation, as to price and all qualitative metrics set out in the Request for Quotation, this Client Services Agreement shall be renewed for an Additional Term.

3.3 Termination at end of Term or Additional Term.

In the event CustomerWorks elects not to match the successful quotation, this Client Services Agreement shall terminate at the end of the Term or Additional Term as appropriate. Clause 18 of this Agreement shall apply and BC Gas will have no further obligation to CustomerWorks hereunder.

3.4 Termination of Specific Client Services at End of Term or Additional Term

- (a) At the end of the Term or any Additional Term thereafter, BC Gas may elect to terminate a specific Schedule or terminate, reduce or substitute Client Services under a specific Schedule where:
 - (i) such Client Service is no longer to be provided by BC Gas to Customers; or
 - (ii) the Client Service has changed in some way material to its delivery.

- (b) BC Gas shall issue a Request for Quotation to third parties for the reduced Services or the Services to be substituted for existing Client Services. CustomerWorks shall have the option of matching the quotation chosen by BC Gas from the responses to the Request for Quotation. Where CustomerWorks elects to match such quotation the subject Schedule as modified shall be renewed for an Additional Term with the modified Client Services provided in consideration for the fees set out in such quotation.
- (c) BC Gas shall notify CustomerWorks in writing of its election under Clause 3.4 on or before the first day of the fifty fourth (54th) month of the Term or on the first day of the sixth month of any Additional Term as appropriate.
- (d) In the event CustomerWorks elects not to match the successful quotation the specific Schedule or modified Client Services provided for in such quotation shall terminate at the end of the Term or Additional Term as appropriate. Clause 18 of this Agreement shall apply and BC Gas will have no further obligation to CustomerWorks with regard to that Schedule or those Client Services except to pay CustomerWorks all accrued obligations or liabilities for Client Services provided prior to such termination in accordance with the terms hereof.
- (e) BC Gas may not outsource the Client Services to a third party, other than as set out above, unless
 - (i) Clause 18.2(c) applies; or
 - (ii) as mutually agreed.

Clause 15.6 does not apply to reduction/modification of Client Services or termination of Schedule(s) effected under this provision.

4. CUSTOMERWORKS' RESPONSIBILITIES

- 4.1 **Base Services.** CustomerWorks shall provide Client Services to BC Gas by performing the specific tasks as set out and described in the Schedules ("Base Services") for the Base Fees more specifically described in Clause 8.1.
- 4.2 Additional Services. CustomerWorks shall provide the additional Client Services described below ("Additional Services") at BC Gas' request by providing:
 - (a) new Client Services arising out of a Scope Change described in Clause 15;

- (b) Client Services which are incremental or additional to the Base Services; or
- (c) the same Client Services by different means or through different practices, by way of a Scope Change.

BC Gas shall pay Additional Fees for the Additional Services in accordance with Clause 8 below. The Additional Services shall be performed according to the Performance Standards, defined in Clause 4.3 below, and other terms and conditions described in this Client Services Agreement (including the applicable Schedules), except as expressly modified by a Scope Change.

4.3 Performance Standards. CustomerWorks shall perform Client Services at a service level target as set out in the applicable Performance Measures and Penalties clause in each Schedule and where no service level target is provided for in a Schedule such Client Services shall be provided at service levels substantially similar to current market standards for similar services provided to similar Customers ("Performance Standards"). Where Client Services are to be provided at current market standards in accordance with the foregoing sentence, the Scope Change provisions of Clause 15 shall apply. For greater certainty, the parties agree that it is their intention that Client Services be provided by CustomerWorks at a level consistent with the level of service provided at the effective date hereof by BC Gas. The scope of services and levels of performance documented in the Schedules are intended to be consistent with the level of service BC Gas currently provides to Customers.

The parties acknowledge that it may not be possible for CustomerWorks to attain Performance Standards during the 90 day period following repatriation of the Lower Mainland Customers (the "Adjustment Period"). Accordingly, penalties normally incurred for failure to attain Performance Standards will be suspended during the Adjustment Period.

The parties further acknowledge that Performance Standards will be re-evaluated by the Client Committee at the end of the Adjustment Period, subject to Clause 15.

4.4 **Change Management.** CustomerWorks shall, using commercially reasonable efforts, proactively monitor, investigate, assess and report to BC Gas, all material and relevant industry and marketplace changes in technology and in work place practices which may improve the Performance Standards, improve the efficiency or quality of the delivery of Client Services to BC Gas. Any material change to CustomerWorks' practices or procedures in the delivery of Client Services is subject to

the Scope Change process described in Clause 15. Any efficiency gains or cost of service improvements resulting from changes in relation to the Base Services shall be to the benefit of CustomerWorks, and if in relation to the Additional Services, to the benefit of both parties according to the negotiated terms of the Scope Change or the modified pricing terms of the Schedule applicable to the Additional Services.

- 4.5 **Invoice Format.** CustomerWorks shall prepare and deliver invoices to BC Gas each month, in accordance with the format and content requirements set out in the Protocol, in accordance with Clause 8 below.
- 4.6 Additional Standards. CustomerWorks shall perform all other obligations arising under this Client Services Agreement in a diligent, timely fashion and in accordance with sound business practices applicable to the task or obligation in question. CustomerWorks shall ensure that all of its personnel are properly trained and qualified in accordance with Canadian industry standards and practices having regard to the function or task such personnel are assigned to perform.
- 4.7 **Compliance with Laws.** CustomerWorks shall perform the Client Services in compliance with all applicable federal, provincial, municipal and other laws, bylaws, regulations and statutes and any regulatory orders, decisions or rulings that may be applicable to CustomerWorks or this Client Services Agreement. Throughout the Term, CustomerWorks shall remain duly qualified to do business in the Province of British Columbia.
- 4.8 **Disaster Plans.** CustomerWorks shall develop, administer and test emergency response plans ("ERPs") in anticipation of events or disasters of varying types affecting the delivery of Client Services which set out a work continuance plan. The primary goal of the ERPs shall be to minimize Client Service disruption and to restore the affected Client Service in a commercially reasonable manner in as timely a way as is reasonably possible.
- 4.9 Access Management. CustomerWorks will provide BC Gas (and its authorized employees, agents, subcontractors and suppliers) with access to its hardware, software, network, and other assets and records as are reasonably required in the use of the Client Services during its normal hours of business. CustomerWorks shall develop and administer appropriate security procedures regarding such access with respect to the maintenance of BC Gas information and Data (including Data back-up procedures) and notify BC Gas of such procedures and any changes made from time to time which are reasonably necessary or desirable to protect and preserve the same and provided such changes do not result in a reduction in

CustomerWorks' capacity or ability to perform any of the Client Services according to the Performance Standards.

- 4.10 **Personal Information Protection.** CustomerWorks shall comply with privacy related obligations under the federal Personal Information Protection and Electronics Documents Act (the "PIP Act") and any and all equivalent and applicable provincial legislation that is in force with respect to the provision of the Client Services. BC Gas shall monitor CustomerWorks' ongoing compliance with the PIP Act on a regular basis in accordance with the process and standards set out in the Protocol.
- 4.11 **Subcontractors.** CustomerWorks shall insure that any subcontractors and suppliers used to assist in the delivery of the Client Services shall be suitably qualified and experienced and that they will comply with all of the terms of the Client Services Agreement that may apply to their activities. CustomerWorks shall be responsible for the actions and omissions of its contractors.
- 4.12 Account Manager. CustomerWorks shall appoint an account manager ("Account Manager") whose primary responsibility will be management of the BC Gas account and shall have the authority to bind CustomerWorks. If BC Gas, acting reasonably, is not satisfied with the services of the Account Manager it shall provide notice to CustomerWorks with reasons for its dissatisfaction and request that the person be replaced. CustomerWorks shall, using commercially reasonable efforts, replace the Account Manager with a candidate satisfactory to BC Gas within 4 weeks of the date of notice.
- 4.13 **Service Level Reporting**. CustomerWorks shall be responsible for fulfilling all service level reporting requirements set out in each of the Schedules.
- 4.14 **Business Efficiencies.** CustomerWorks shall use commercially reasonable efforts to proactively, reasonably, investigate, assess and apprise BC Gas of potential business opportunities with third parties or other clients of CustomerWorks that will result in reducing BC Gas' costs for Client Services, increasing Client Services efficiencies and allowing BC Gas to avail itself of any business synergies relating to Client Services.

Any efficiency gains or cost of service improvements resulting from business relationships between CustomerWorks, BC Gas and third parties in relation to the Base Services shall be to the benefit of CustomerWorks and if in relation to the Additional Services, to the benefit of CustomerWorks and BC Gas according to the negotiated terms of the Scope Change or the modified pricing terms of the Schedule applicable to the Additional Services.

4.15 Data Security. CustomerWorks shall use commercially reasonable efforts to maintain the confidentiality of Data at levels substantially similar to the level of security provided by BC Gas for Data at the Effective Date hereof.

5. **BC GAS' RESPONSIBILITIES**

- 5.1 Information and Data. BC Gas shall provide to CustomerWorks such information, access to and use of Data that CustomerWorks may reasonably require to perform the Client Services.
- 5.2 **Payment for Services.** BC Gas shall pay CustomerWorks for all Base Services and any Additional Services at the prices or fees set out in the Schedules and according to the terms of payment described in Clause 8.
- 5.3 Forecasts. BC Gas will provide CustomerWorks with forecasts of Client Service requirements as part of the Client Committee's ongoing monitoring and annual planning process described in Clause 6.
- 5.4 BC Gas Administrator. BC Gas shall appoint an administrator (the "BC Gas Administrator") who shall have the authority to bind BC Gas. If CustomerWorks, acting reasonably, is not satisfied with the services of the BC Gas Administrator it shall provide notice to BC Gas with reasons for its dissatisfaction.

The BC Gas Administrator will manage and develop the Protocol as required. The BC Gas Administrator and CustomerWorks' Account Manager will, with input from each of the parties' internal personnel, develop a process for amending the Protocol, keeping it up to date and reflecting all current business practices and policies. No change to the Protocol may be made without the express written consent of the BC Gas Administrator and the CustomerWorks' Account Manager.

CLIENT COMMITTEE 6.

- 6.1 Purpose. CustomerWorks and BC Gas will establish a committee of at least two representatives from each firm in addition to the BC Gas Administrator and the CustomerWorks' Account Manager (the "Client Committee") for the purposes of:
 - monitoring the ongoing performance of CustomerWorks (a) hereunder;
 - (b) anticipating and predicting future Client Service requirements of BC Gas:

- (c) sharing information and knowledge with respect to industry and marketplace developments in the areas of technology change, work place practices, and competitive pressures;
- (d) developing an approach to continuous improvement in accordance with the provisions hereof which includes:
 - (i) documenting, on an annual basis, clearly defined goals and objectives;
 - (ii) setting and identifying targets, benchmarks and historical trending against which performance will be compared for improvement in each Client Service area; and
 - (iii) setting improvement targets in each Service area;
- (e) investigating and resolving billing/invoicing issues/problems;
- (f) reviewing proposed changes to Client Services resulting from Scope Changes or CustomerWorks' rectification of deficiencies/problems in performance;
- (g) escalating unresolved issues to the internal dispute resolution process of Clauses 16 and 17;
- (h) making the Volume Adjustments to the Base Fees as provided for in Clause 8.3;
- (i) considering and, with the agreement of the parties, modifying the reporting obligations of CustomerWorks as currently described in the Schedules; and
- (j) determining the requirement for CustomerWorks to submit a Service Interruption Plan in accordance with Clause 9.2.
- 6.2 **Meetings.** The Client Committee shall meet not less than monthly (which meeting may take place by teleconference call) and shall develop its own rules of procedure and protocol. Each of BC Gas and CustomerWorks shall be entitled to change its appointed representatives to the Client Committee at any time by providing written notice of the change to the other party.
- 6.3 **Multi-Client Meetings.** CustomerWorks may from time to time organize meetings of representatives of some or all of its clients, including BC Gas, for the purpose of reviewing and discussing matters of common interest to the clients in relation to the Client Services. CustomerWorks will give BC Gas a minimum of seven (7) days notice of all such meetings supported by an agenda and list of attendees.

7. DATA AND PROPRIETARY INTERESTS

- 7.1 **Customer Information.** "BC Gas Property" shall mean all proprietary information, documentation, software and other intellectual property and Data provided by BC Gas to CustomerWorks or used by BC Gas with CustomerWorks, excluding CustomerWorks Property defined in Clause 14.1. BC Gas shall retain control over and the use of all BC Gas Property. The parties acknowledge that all Data is owned by BC Gas and shall only be used by CustomerWorks for the purposes of providing the Client Services. CustomerWorks shall return to BC Gas, promptly upon request, all or any of the BC Gas Property and any Data generated from new Customers in accordance with the provisions of Clause 18. CustomerWorks shall treat BC Gas Property in accordance with Clause 19 below.
- 7.2 **Proprietary Know-How.** Except for proprietary information supplied by BC Gas to CustomerWorks, or as otherwise provided for in Clause 7.3 below, or as otherwise agreed by the parties, CustomerWorks will be responsible for developing or acquiring (by purchase or license) all software and proprietary know-how which may be required to provide the Client Services according to the Performance Standards.
- 7.3 **Ownership-Service Technology.** Ideas, concepts, know how or techniques relating to the Client Services developed or acquired during the Term, other than under the Asset Transfer Agreement ("Service Technology") shall be treated as follows:
 - (a) if developed or acquired by BC Gas personnel it will be the property of BC Gas and BC Gas will grant CustomerWorks a non-exclusive, irrevocable and royalty free license to use the Service Technology during the Term subject to such reasonable restrictions or limitations as BC Gas may impose for competitive, regulatory or other business protection reasons;
 - (b) if developed or acquired by CustomerWorks' personnel the Service Technology will be the property of CustomerWorks and CustomerWorks will grant BC Gas a non-exclusive, irrevocable and royalty free license to use the Service Technology during the Term subject to such reasonable limitations or restrictions as CustomerWorks may impose for competitive or other business protection reasons;
 - (c) if developed or acquired jointly by the parties hereto the Service Technology will be jointly owned and limitations on its use shall be based on the agreement reached before such development or acquisition by the Account Manager and the BC Gas Administrator considering each party's contribution, subject to any limitations or constraints which may be imposed

by a third party who either BC Gas or CustomerWorks is bound to with respect thereto, provided that the party hereunder so bound notified the other party.

8. FEES AND INVOICING

- 8.1 **Base Fees.** BC Gas shall pay CustomerWorks the annual Base Fees as identified in each of the Schedules attached hereto. The Base Fees are inclusive of all reimbursable expenses and exclusive of all applicable taxes. The Base Fees shall be subject to penalties and adjustments made in accordance with this Client Services Agreement for CustomerWorks' failure to provide Client Services in accordance with the Performance Standards ("Financial Adjustments"). Subject to Financial Adjustments BC Gas shall pay CustomerWorks the Base Fees whether or not actual activity levels for Client Services are less than the Forecasted Activity levels set at the beginning of each year of the Term. The Base Fees shall be paid in monthly installments on the fifteenth day of each month for Client Services rendered in the previous month. Commencing in January 2003 the Base Fees will be adjusted for increases and decreases in Customer volumes in accordance with the volume adjustment methodology described in Clause 8.3.
- 8.2 Additional Fees. BC Gas shall pay CustomerWorks additional fees ("Additional Fees") for Additional Services as described in Clause 4.2. The Additional Fees shall be determined:
 - (a) at rates set out in Schedule "B" Appendix "B1"; or
 - (b) according to the specific pricing terms of the applicable Schedule; or
 - (c) at lump sum rates as may be negotiated by the parties at the time of the Additional Services as requested as part of the Scope Change or otherwise.
- 8.3 **Volume Adjustments.** Commencing in January 2003 the Base Fees will be adjusted at the end of each calendar month to reflect changes, both increases and decreases, in the volume of Customers supported by CustomerWorks during the month in accordance with this provision ("Volume Adjustments"). Volume Adjustments will be calculated by multiplying the Base Fee times a factor (the "Customer Adjustment Factor"). The Customer Adjustment Factor is calculated by dividing the number of active services reflected in the Customer Systems at the end of the calendar month by 770,000, that being the number of active services used in the determination of the Base Fees as reflected in each of the Schedules. Volume Adjustments will be

applied to the Base Fee in the month following the change. For the purposes of this Clause, "active services" shall mean the number of BC Gas meters installed for use by Customers.

- 8.4 **Invoicing and Payment Terms.** CustomerWorks will submit invoices to BC Gas on a monthly basis (the "Invoice") which Invoices will include:
 - (a) Base Fees

Annual Base Fees set out in each Schedule shall be divided into twelve (12) equal payments and are subject to the monthly Volume Adjustments under Clause 8.3 and any annual adjustments as provided in the applicable Schedule.

(b) Additional Fees

Additional Fees shall be included when Additional Services are used on an "as and when required" basis.

(c) Penalties

Subject to Clause 4.3, penalties for failure to meet Performance Standards are set out in each Schedule and will be deducted from the Invoice following the period the penalty was realized.

Specific invoicing terms may be included in a particular Schedule and will take precedence over the general invoicing and payment terms set out above.

- 8.5 **Taxes.** In addition to Base Fees and Additional Fees, and with respect thereto, BC Gas shall pay:
 - (a) applicable British Columbia Social Services tax ("BCSST"); and
 - (b) federal Goods and Services Tax ("GST");

The invoice will include:

- (a) sufficient information to identify CustomerWorks or CustomerWorks trading name;
- (b) CustomerWorks' GST registration number;
- (c) sufficient information to identify the reporting period when the GST, in respect of the Client Services being provided by CustomerWorks, was paid or became payable and the amount of the GST paid or payable;
- (d) sufficient information to identify the name or trading name of BC Gas; and
- (e) sufficient information to specifically identify the nature of the Client Services being provided and invoiced.

BC Gas shall have no liability or responsibility for the withholding, collection or payment of income taxes, unemployment insurance, statutory or other taxes or payments of any other nature on behalf of or in respect of or for the benefit of CustomerWorks, other than withholding taxes, if any, imposed by the <u>Income Tax Act</u> (Canada) with respect to payments to non-resident persons as defined therein. CustomerWorks agrees to indemnify and hold BC Gas harmless from and against any order, penalty, interest or tax that may be assessed or levied against BC Gas as a result of the failure or delay of CustomerWorks to file any return or information required to be filed by CustomerWorks, by any law, ordinance or regulation relating to the Client Services performed by CustomerWorks herein. Without limiting the generality of the foregoing, BC Gas shall not have liability or responsibility for the payment of any penalty or interest assessed or levied against CustomerWorks as a result of the failure of CustomerWorks to charge or remit the GST as required under the Excise Tax Act of Canada.

8.6 **Late Payment.** Late payments of undisputed Base Fees or Additional Fees shall accrue interest at an interest rate agreed to be the prime rate of interest of the Toronto-Dominion Bank from time to time (or its successor or permitted assign) (Toronto Main Branch) plus one percent (1%) calculated daily from the date the Base Fees or Additional Fees became due. No late fee shall be charged on reasonably disputed Base Fees or Additional Fees.

9. ALTERNATIVE DELIVERY OF CLIENT SERVICES

9.1 CustomerWorks shall have predetermined Emergency Response Plans ("ERP(s)") in place to respond to interruptions in the delivery by it of Client Services caused by non Force Majeure events, which plans shall have the purpose of mitigating the damages suffered by BC Gas as reasonably as possible. BC Gas shall, acting reasonably, and in any event not more than once every six months have the right to inspect the ERP(s), the results of ERP testing and the general state of CustomerWorks' readiness at any time upon seven (7) Business Days written notice. Where an ERP has not been established by BC Gas in respect of the Client Services prior to the Effective Date CustomerWorks shall prepare a detailed implementation plan for the ERP within the first one hundred and eighty (180) days of the Term and developed and tested the ERP on or before July 1, 2002. ERP development and testing costs shall be shared by the parties. In the event the parties cannot agree on a cost sharing arrangement, the matter shall be escalated to the Client Committee to determine.

- 9.2 In the event that while the ERP is in place it appears to the parties that the delivery of a Client Services will be interrupted for a prolonged period of time, such period to be determined in each specific Service Schedule, the Client Committee shall instruct CustomerWorks to submit a contingency plan to BC Gas which provides for alternative delivery of the Client Services (the "Service Interruption Plan").
- 9.3 BC Gas shall review the Service Interruption Plan as follows:
 - (a) Step 1

The BC Gas Administrator will advise the Account Manager that it intends to review the Service Interruption Plan.

(b) Step 2

The BC Gas Administrator and the Account Manager shall immediately review the Service Interruption Plan and will, as soon as possible and in any event no longer than within 3 hours, or such time as they mutually agree to be reasonable, agree on the plan or elect to escalate the review to the next reporting level.

(c) Step 3

If unresolved at Step 2, the review shall be escalated by either the BC Gas Administrator or the Account Manager to the Client Committee who shall, upon receipt of notification, within 2 Business Days, or such time as they mutually agree, finalize the review or escalate it to the next reporting level.

(d) Step 4

If unresolved at Step 3, the review shall be escalated by the Client Committee to the Vice-President of CustomerWorks selected by the Account Manager and the Vice-President of BC Gas selected by the BC Gas Administrator who shall, upon receipt of notification by the Client Committee, within 5 Business Days, or such time as they mutually agree, finalize the review or elect to escalate it to the next reporting level.

(e) Step 5

If unresolved at Step 4, the review shall be escalated by the Vice-Presidents of each of CustomerWorks and BC Gas to the President of CustomerWorks and the Chief Executive Officer of BC Gas who shall, upon notification by the CustomerWorks and BC Gas Vice-Presidents, within 5 Business Days, or such time as they mutually agree, review the Service Interruption Plan with the result that:

(i) BC Gas accepts the Service Interruption Plan; or

- BC Gas rejects the Service Interruption Plan and in its sole and absolute discretion locates and contracts with an alternative Client Service provider with the reasonable costs of such relocation for the account of CustomerWorks; or
- (iii) the parties submit the dispute over the Service Interruption Plan to the mediation and arbitration process outlined below; or
- (iv) BC Gas terminates the Specific Service Schedule or the Client Services Agreement in accordance with Clause 18.
- 9.4 In the event that BC Gas elects to proceed with Clause 9.3(e)(ii) it may retain Client Services from the alternative Client Service provider:
 - (a) as long as it deems necessary; or
 - (b) until the matter is resolved in accordance with Clause 17; or
 - (c) until BC Gas elects, in its sole and absolute discretion to terminate the specific Service Schedule or the Client Services Agreement;

provided that in no event shall the arrangements in Clause 9.3 (e)(ii) continue for more than 12 months from the date of the determination by BC Gas in Clause 9.3 (e)(ii).

- 9.5 If CustomerWorks objects to BC Gas' actions under Clause 9.3 (e)(ii) it may submit a claim to the internal dispute resolution process. If it is determined that its Service Interruption Plan would have reasonably restored Client Services and mitigated disruption to BC Gas, BC Gas will be responsible for all costs incurred by both BC Gas and CustomerWorks as a result of rejecting the Service Interruption Plan.
- 9.6 In the event this Client Services Agreement is terminated in accordance with Clause 9.4(c) above, BC Gas shall pay CustomerWorks the net book value of the licenses described below at the date of termination less any amounts outstanding and owing to BC Gas from CustomerWorks hereunder and CustomerWorks shall forthwith assign its interest in the license agreement between BC Gas and Peace North America dated September 16, 1999 (the "License Agreement") and relevant maintenance agreement then in force and the escrow agreement relevant to the License Agreement and/or maintenance agreement to BC Gas.

10. FORCE MAJEURE

10.1 **"Event of Force Majeure" or "Force Majeure"** means acts of God, public enemy, terror, wars (declared or undeclared), revolutions,

insurrections, civil commotion, fires, floods, slides, epidemics, quarantine restrictions, freight embargoes or power failures, strikes, walkouts (excluding illegal lockouts) or any event or circumstance which reasonably constitutes a material disabling event or circumstances, which is beyond the reasonable control of a party, which does not arise from the neglect or default of a party, and which will or is likely to result, in a material delay, interruption or failure by a party in carrying out its duties, covenants or obligations under this Client Services Agreement, but which does not mean or include any delay caused by a party's lack of funds or financial condition, except where BC Gas suffers a lack of funds or an impaired financial condition caused by an Event of Force Majeure which results in CustomerWorks' inability to provide any or all of the Client Services.

10.2 Notification of Event of Force Majeure

Except as otherwise specifically provided for in any Schedule attached hereto where applicable, on the occurrence of an Event of Force Majeure the party claiming Force Majeure will promptly notify the other of the particulars of the relevant event or circumstances and, if reasonably possible, supply supporting evidence. Each party shall use all reasonable commercial efforts to remove, curtail or contain the cause of the delay, interruption or failure, and resume, with the least possible delay, compliance with its respective duties, covenants and obligations under the Client Services Agreement. Neither party shall be liable to the other for any delay, interruption or failure in the performance of its duties, covenants or obligations hereunder if caused by an Event of Force Majeure.

10.3 If the Event of Force Majeure is of such a nature that the Client Services to be performed under this Client Services Agreement would be substantially different than those required under a normal state of operation of the Client Services, CustomerWorks shall make reasonable commercial efforts to return the Client Services to the normal state of operations within a reasonable period of time after occurrence of the Event of Force Majeure having regard to the circumstances and in any event not later than two months after the Force Majeure notice described in Clause 10.2 above is given. In the event the Client Services cannot be returned to the pre-Event of Force Majeure level of service within this time period, either party may during the next 30 days initiate negotiations to modify the Client Services and the terms and conditions of this Client Services Agreement to ensure delivery of the Client Services to standards satisfactory to BC Gas acting reasonably in the circumstances and on terms acceptable to both parties. If either party is not satisfied with such negotiations at the end of such thirty (30) day period, such party

may terminate this Client Service Agreement in accordance with Clause 18.

In the event of termination in accordance with this Clause, BC Gas shall pay CustomerWorks the net book value of the licenses subject of the License Agreement less any amounts outstanding and owing to BC Gas from CustomerWorks hereunder and CustomerWorks shall forthwith assign its interests in the License Agreement, any relevant maintenance agreement then in force and the escrow agreement relevant to the License Agreement and/or maintenance agreement to BC Gas.

11. **INSURANCE**

- 11.1 Customerworks shall, without limiting its obligations or liabilities herein and at its own expense, provide and maintain the following insurances in forms and amounts acceptable to BC Gas acting reasonably:
 - (a) Comprehensive General Liability insurance on an occurrence basis, in an amount not less than Three Million Dollars (\$3,000,000) per occurrence against bodily and personal injury, property damage and death. While the policy shall be endorsed to add BC Gas as an additional insured under this policy, CustomerWorks shall be at liberty to name any secured lender providing financing to CustomerWorks as first loss payee on any policy of insurance upon prior written notice to BC Gas. Such insurance shall include, but not be limited to:
 - (i) Blanket Written Contractual Liability
 - (ii) Contingent Employer's Liability
 - (iii) Personal Injury Liability
 - (iv) Non-Owned Automobile Liability
 - (v) Employees as Additional Insureds
 - (vi) Broad Form Property Damage
 - (b) Workers' Compensation Insurance in accordance with the statutory requirements in British Columbia for all its employees located in British Columbia engaged in performing the Client Services.
 - (c) CustomerWorks shall provide BC Gas with evidence of all required insurance before commencing operation under this Client Services Agreement. Such evidence shall be in the form of a Certificate of Insurance.

- (d) CustomerWorks acknowledges that any requirement or advice by BC Gas as to the amount of coverage under any policy of insurance will not constitute a representation by BC Gas that the amount required is adequate and CustomerWorks acknowledges and agrees that it is solely responsible for obtaining and maintaining policies of insurance in adequate amounts.
- 11.2 **Property Insurance.** CustomerWorks shall at all times during the Term, insure and keep insured or cause to be insured and kept insured all insurable property belonging to CustomerWorks in an amount not less than the replacement cost thereof against loss or damage by perils of "all risks" (being the perils included in the standard "all risks" policy).
- 11.3 **Substantial Destruction**. In the event of an insurable event resulting in a substantial destruction or loss to CustomerWorks' assets not dealt with in Clause 9 or 10 BC Gas shall have the right to participate with CustomerWorks in the development of a disaster recovery process in relation to the Client Services using the proceeds of insurance available to CustomerWorks that relate directly to the assets used to provide the Client Service and, either:
 - (a) decide on a restorative business plan which is mutually agreeable to both parties; or
 - (b) determine the course of disaster recovery actions CustomerWorks is to take.

12. **REPRESENTATIONS AND WARRANTIES**

- 12.1 **BC Gas' Representations and Warranties.** BC Gas hereby represents and warrants to CustomerWorks that:
 - (a) it is duly incorporated and validly existing under the laws of the Province of British Columbia;
 - (b) it has the corporate power and the capacity to enter into, and to perform its obligations under this Client Services Agreement. Each of this Client Services Agreement and each of the agreements, contracts and instruments required by this Client Services Agreement to be delivered by it has been duly authorized;
 - (c) this Client Services Agreement has been duly executed and delivered by it and is a valid and binding obligation of it, enforceable against it in accordance with its terms subject to applicable bankruptcy and insolvency laws;

- (d) neither the entering into of this Client Services Agreement, nor the performance by it of any of its obligations under this Client Services Agreement and each other agreement required thereunder will contravene, breach or result in any default under the articles, by-laws, constating documents or other organizational documents or resolutions of it or under any mortgage, lease, contract, agreement, other legally binding instrument, license, permit, statute, regulation, order, judgment, decree or law to which it is a party or by which it may be bound;
- (e) its activities in connection with this Client Services Agreement do not and will not constitute a default or breach (or an event which, with the passage of time or giving of notice, would constitute a default or breach) of any agreement by which it or any of its applicable personnel are bound; and
- (f) it shall comply with its privacy rights related obligations under the federal Personal Information Protection and Electronics Documents Act and under any and all equivalent provincial legislation to the extent that such obligations related to privacy rights apply to the other party in respect of Customers.
- 12.2 **CustomerWorks' Representations.** CustomerWorks hereby represents and warrants that:
 - (a) it is established and validly existing as a limited partnership under the laws of the Province of Alberta;
 - (b) it has the corporate power and the capacity to enter into, and to perform its obligations under this Client Services Agreement. Each of this Client Services Agreement and each of the agreements, contracts and instruments required by this Client Services Agreement to be delivered by it has been duly authorized;
 - (c) this Client Services Agreement has been duly executed and delivered by it and is a valid and binding obligation of it, enforceable against it in accordance with its terms subject to applicable bankruptcy and insolvency laws;
 - (d) neither the entering into of this Client Services Agreement, nor the performance by it of any of its obligations under this Client Services Agreement and each other agreement required thereunder will contravene, breach or result in any default under the articles, by-laws, constating documents or other organizational documents or resolutions of it or under any mortgage, lease, contract, agreement, other legally binding instrument, license, permit, statute, regulation, order,

judgment, decree or law to which it is a party or by which it may be bound;

- (e) its activities in connection with this Client Services Agreement do not and will not constitute a default or breach (or an event which, with the passage of time or giving of notice, would constitute a default or breach) of any agreement by which it or any of its applicable personnel are bound; and
- (f) it shall comply with its privacy rights related obligations under the federal Personal Information Protection and Electronics Documents Act and under any and all equivalent provincial legislation to the extent that such obligations related to privacy rights apply to the other party in respect of Customers.

12.3 CustomerWorks' Warranties

- (a) **Service Standards**. CustomerWorks warrants that the Client Services will be performed consistent with the Performance Standards and shall perform all other obligations arising under this Client Services Agreement in a diligent, timely fashion. It further warrants that its personnel are properly trained and qualified in accordance with industry standards and practices having regard to the function or task such personnel are assigned to perform.
- (b) **Financial Adjustments.** Subject to Clause 4.3, BC Gas shall make Financial Adjustments to the applicable Base Fees or Additional Fees payable by BC Gas for failure by CustomerWorks to meet the Performance Standards according to the criteria and principles set out in the Performance Measures and Penalties clause in each Schedule.
- (c) **Right to Damages.** If CustomerWorks is unable to satisfactorily cure or rectify the failure to meet Performance Standards and BC Gas has suffered actual damages or loss, BC Gas may recover from CustomerWorks the direct foreseeable damages (excluding lost profits) BC Gas suffers as a result of CustomerWorks' failure to provide a Client Service in accordance with the Performance Standards. CustomerWorks shall not be liable for damages or loss to the extent the damage or loss was caused or contributed to by BC Gas' failure to comply with its obligations under the Client Services Agreement.

13. INDEMNIFICATION AND LIMITATION OF LIABILITY

- 13.1 CustomerWorks shall defend and indemnify BC Gas and its servants and agents against all actions, claims and demands (including the cost of defending or settling any action, claim or demand) which may be instituted against BC Gas arising out of or resulting from any breach of warranty, non-fulfillment by CustomerWorks, its employees, agents, subcontractors of any covenant or obligation on the part of CustomerWorks herein or the negligence of CustomerWorks, its agents, employees or any sub-contractor or of any other person for whose acts or omissions CustomerWorks is vicariously liable hereunder and also against any action, claim or demand by CustomerWorks' servants, employees or agents or their personal representatives or dependents arising out of such negligence.
- 13.2 CustomerWorks shall defend, indemnify and hold BC Gas harmless from and against all claims, damages, losses and expenses (including, but not limited to, reasonable legal fees) arising by reason of or resulting from any bodily injury or death of any person or damage to real and/or tangible personal property incurred by CustomerWorks, its personnel or subcontractors, as a result of and to the extent proximally caused by any negligent or wrongful act or omission of CustomerWorks, its personnel or subcontractors in the performance of the Client Services, or arising from claims against BC Gas by third parties caused by the fault or negligence of CustomerWorks, its employees, agents or subcontractors in the performance or non-performance of any of their obligations under this Client Services Agreement.
- 13.3 BC Gas releases and shall defend and indemnify CustomerWorks, its servants and agents against all actions, claims and demands (including the cost of defending or settling any action, claim or demand) which may be instituted against CustomerWorks arising out of or resulting from any breach of warranty, non-fulfillment by BC Gas, its employees, agents, and subcontractors of any covenant or obligation on the part of BC Gas herein or the negligence of BC Gas, its agents, employees or any sub-contractor or of any other person for whose acts or omissions BC Gas is vicariously liable hereunder and also against any action, claim or demand by BC Gas, its servants, employees or agents or its personal representatives or dependents arising out of such negligence.
- 13.4 BC Gas shall defend, indemnify and hold CustomerWorks harmless from and against all claims, damages, losses and expenses (including, but not limited to, reasonable legal fees) arising by reason of or resulting from any bodily injury or death of any person or damage to real and/or tangible personal property incurred by BC Gas, its personnel or subcontractors, as a result of and to the extent proximally

caused by any negligent or wrongful act or omission of BC Gas, its personnel or subcontractors in the performance of the Client Services or its obligations hereunder, or arising from claims against CustomerWorks by third parties caused by the fault or negligence of BC Gas, its employees, agents or subcontractors, in the performance or non-performance of any of its obligations under this Client Services Agreement.

13.5 **Conduct of Defence**

Each party seeking indemnification will promptly notify the party from whom indemnification is sought in writing of any claim or action arising as described in this Clause 13 and shall furnish the other party with a copy thereof as well as any documentation and information related thereto reasonably requested by the party providing indemnification. CustomerWorks shall have sole responsibility for the defence of any claim or action under Clauses 13.1 and 13.2. BC Gas shall have sole responsibility for the defence of any claim or action under Clause 13.3 and 13.4. Each party seeking indemnification shall provide reasonable cooperation, at its own expense, in any defence of any such claim or action by the other party.

13.6 Remedy

Subject to Clauses 9 and 10, if any breach of the Client Services Agreement by CustomerWorks materially prevents, hinders or delays the performance of the Client Services necessary for the performance of BC Gas' critical business functions, then at BC Gas' option, without terminating the Client Services Agreement, BC Gas may stop payment for the affected Client Services and immediately move the affected Client Service to a third party until the problem has been remedied to BC Gas' satisfaction.

13.7 Limitation of Liability

- (a) During the Term and any Additional Term, the liability of CustomerWorks to BC Gas hereunder shall be limited to damages in the maximum amount of the sum of the Annual Base Fees set out in the Schedules.
- (b) Each party acknowledges and agrees that notwithstanding Clauses 13.1 – 13.4 and except for the party's obligations of confidentiality and indemnification for infringement, in no event shall a party or any of their respective officers, directors, employees, shareholders, agents, or representatives be liable to the other party, any of its Affiliates, or any other party for any special, indirect, incidental, exemplary, or consequential damages or loss of profits or goodwill, whether such liability is

based on contract, tort, negligence, strict liability, products liability or otherwise, in any way arising from or relating to this Client Services Agreement or resulting from the performance or non-performance of any Client Services, including the failure of essential purpose, even if the party has been notified of the possibility or likelihood of such damages occurring. Notwithstanding the foregoing, in no event shall a party be liable for loss of profits arising from (i) a breach of that party's obligations of confidentiality, or (ii) infringement.

14. **INDEMNIFICATION FOR INFRINGEMENT**

- 14.1 **Indemnity by CustomerWorks.** Subject to the limitations of liability described in Clause 13.7 above, CustomerWorks will, excluding in respect of (i) software and any other intellectual property transferred by BC Gas Inc. to CustomerWorks under the Asset Transfer Agreement dated on or about December 31, 2001 (the "CustomerWorks Property"); and (ii) BC Gas Property, defend at CustomerWorks' expense, indemnify and hold BC Gas harmless from and against any loss, cost and expense that BC Gas incurs because of a claim that the use of the Client Services infringes any Canadian or United States copyright, patent or other proprietary know-how or trade secret of any third party. CustomerWorks' obligations under this indemnification are subject to the following conditions:
 - (a) BC Gas shall promptly notify CustomerWorks of any such claim;
 - (b) BC Gas shall in writing grant CustomerWorks the sole control of the defense of any such claim and of all negotiations for its settlement or compromise (subject to BC Gas' right to represent its own interests, at its own expense in such action);
 - (c) BC Gas shall cooperate with CustomerWorks to facilitate the settlement or defense of the claim; and
 - (d) the claim must have not arisen as a consequence of the negligence or willful act of BC Gas.
- 14.2 **Substituted Services.** Where a Court of final jurisdiction makes a determination that CustomerWorks has infringed the intellectual property rights of a third party or otherwise prohibits the use by CustomerWorks of intellectual property that is material to the delivery of Client Services (in each case, the "Property"), CustomerWorks shall provide the Client Service in a manner that does not infringe the rights of the third party in respect of the Property at no further expense to BC Gas. Any substituted Client Services must

be substantially equivalent in function as the Client Services being replaced.

This Clause shall not apply to the CustomerWorks Property or the BC Gas Property.

15. SCOPE CHANGE PROCESS

- 15.1 **Triggers.** The parties agree that scope changes to Client Services (a "Scope Change") may be required from time to time for a variety of reasons including, but not limited to:
 - (a) need for increased functionality in a system including increased functionality beyond that contemplated in the Project Transfer Agreement;
 - (b) increase/decrease in Customer base exclusive of increases due to natural population growth;
 - (c) change in BC Gas' needs;
 - (d) change in the law or changes initiated by the British Columbia Utilities Commission;
 - (e) CustomerWorks' or BC Gas' desire to change some aspect of the Client Services to reflect improvements in prevailing industry standards or practices; or
 - (f) other circumstances which reasonably require the parties to request a change in the:
 - (i) scope of Client Services;
 - (ii) Performance Standards; or
 - (iii) Base Fees; or
 - (iv) Client Service delivery practices.
- 15.2 **Initiating Notice.** Either party may, acting reasonably, initiate a Scope Change by providing the other party with written notice setting out:
 - (a) the basis for the proposed Scope Change;
 - (b) the expected impact of the change to fees, method of Client Service or Performance Standard or Client Service activity levels; and
 - (c) a reasonable time for response which shall not be less than 5 days or any more than 20 days unless the parties mutually agree to a different period of time.
- 15.3 **Response.** The receiving party may either accept, reject or counter the proposed Scope Change in writing setting out:

- (a) a specific response to the proposed Scope Change; and
- (b) the expected impact in terms of costs and business impacts; and
- (c) in the case of rejection or counteroffer, the specific details of same.

Should a mutually acceptable resolution not be reached, either of the parties may submit the matter to the internal dispute resolution process described in Clause 16, provided that the President, in the case of CustomerWorks, or the Chief Executive Officer, in the case of BC Gas, cannot submit the matter to the mediation and arbitration process of Clause 17.

- 15.4 **BC Gas Compelled Changes.** BC Gas shall retain the right to compel a BC Gas initiated Scope Change subject to CustomerWorks' right to refer the disputed Scope Change (including pricing) to the internal dispute resolution process.
- 15.5 **BC Gas Right to Reject.** Notwithstanding the above, BC Gas, acting reasonably, is not obligated to accept a CustomerWorks initiated Scope Change. In the event BC Gas accepts the Scope Change but rejects the price quoted to effect the Scope Change CustomerWorks may submit the matter of pricing to the internal dispute resolution process for resolution.
- 15.6 **Scope Reduction.** BC Gas, acting reasonably, may, through the Scope Change process, reduce the scope of a particular Service. CustomerWorks shall use commercially reasonable efforts to immediately reduce any variable costs associated with the particular Base Fee and will as soon as reasonably possible and, to the extent possible, mitigate the fixed cost portion over time. In the event the parties cannot agree to a process that will effectively reduce the Base Fee the matter shall be referred to the internal dispute resolution process.
- 15.7 **Minimize Disruption.** The parties shall use reasonable commercial efforts to minimize disruption to the delivery of Client Services and to the business operations of BC Gas and CustomerWorks generally where a Scope Change has been requested.
- 15.8 **Consequential Changes to the Client Services Agreement.** In the event that the parties proceed with the Scope Change (either through agreement or dispute resolution) they shall complete an amendment to the relevant Schedule(s) which shall be attached hereto and become a part hereof.

16. **INTERNAL DISPUTE RESOLUTION**
- 16.1 **General Objective.** In the event of any dispute, claim, question or difference arising out of or relating to this Client Services Agreement or any breach hereof, the parties hereto shall use their reasonable commercial efforts to settle such dispute, claim, question or difference internally including resolving such dispute or breach. To this effect, they shall consult and negotiate with each other, in good faith and understanding of their mutual interests, to reach a just and equitable solution satisfactory to all parties.
- 16.2 **Escalation Process.** If an issue as described in Clause 16.1 above arises the parties will, unless otherwise set out in this Client Services Agreements follow the step-by-step correction and resolution procedure set out below to the extent necessary to resolve the dispute:

Step 1

The non breaching party's representative, (BC Gas Administrator/Account Manager) will advise the other party's representative in writing of the alleged breach or dispute.

<u>Step 2</u>

The BC Gas Administrator and Account Manager shall meet to resolve the dispute and will, within forty-eight (48) hours, or such time as they mutually agree, resolve the dispute or elect to escalate it to the next reporting level.

<u>Step 3</u>

If unresolved at Step 2, the dispute shall be escalated by either of the BC Gas Administrator or Account Manager to the Client Committee who shall, upon receipt of notification by the BC Gas Administrator or Account Manager, within two (2) Business Days, or such time as they mutually agree, resolve the dispute or elect to escalate it to the next reporting level.

Step 4

If unresolved at Step 3, the dispute shall be escalated by the Client Committee to the Vice-Presidents of each of CustomerWorks and BC Gas designated by their respective representatives on the Client Committee who shall, upon receipt of notification by the Client Committee, within five (5) Business Days, or such time as they mutually agree, resolve the dispute or elect to escalate it to the next reporting level.

<u>Step 5</u>

If unresolved at Step 4, the dispute shall be escalated by the Vice-Presidents of each of CustomerWorks and BC Gas referred to in Step 4 above to the President of CustomerWorks and the Chief Executive Officer of BC Gas who shall, upon receipt of notification by the CustomerWorks and BC Gas Vice-Presidents, within five (5) Business Days, or such time as they mutually agree to:

- (a) resolve the dispute; or
- (b) abandon the dispute.

If the parties fail to resolve or abandon the dispute either of the President of CustomerWorks or the Chief Executive Officer of BC Gas may submit the dispute to the mediation and arbitration process outlined below.

17. MEDIATION AND ARBITRATION

17.1 **Mediation.** Except where otherwise provided for in this Client Services Agreement, if the parties do not mutually agree on a solution to a dispute, claim, or question, such shall be referred to a mediator. The parties shall use reasonable efforts to appoint a mediator acceptable to both parties.

In the event the parties cannot agree upon and appoint a mediator within two (2) Business Days from the date that a party raised an issue under this Clause, the parties shall refer the matter to the Canadian Foundation for Dispute Resolution, or such mediation or arbitration centre as may be mutually agreed upon in accordance with the Rules of the Institute for the Conduct of Commercial Mediation. The mediation shall:

- (a) to the extent possible, and with the necessary modifications as determined by the mediator, be administered in accordance with the Rules of the Institute for the Conduct of Commercial Mediation;
- (b) be conducted in Vancouver, British Columbia, Canada; and
- (c) be conducted in English.

Notwithstanding the above, no one shall be nominated to act as mediator who is in any way financially interested in the business affairs of either BC Gas or CustomerWorks or any of their respective affiliates.

The mediation shall take place between the parties' designated representatives having the authority to bind their respective company. They shall each make themselves available at such times and such places for mediation as the mediator in his or her sole discretion may decide. Each party shall bear its own costs of the mediation together with onehalf of the mediator's and any third party costs reasonably required by the mediator.

The parties will continue to fulfil their respective obligations pursuant to this Client Services Agreement during the mediation of any dispute in accordance with this Clause 17.1.

If the mediation does not resolve the dispute between the parties within thirty (30) days of the appointment of the mediator, each party may commence arbitration proceedings as otherwise provided herein but only if the party seeking to commence such proceeding has first obtained from the mediator written confirmation it has made itself reasonably available and has made good faith efforts to resolve the dispute through mediation. To the extent allowed at law, neither the subject matter of the mediation nor any records, notes or other documents specifically produced for use in, or created during the mediation shall be admissible or referred to in any subsequent arbitration proceeding.

17.2 **Arbitration.** All disputes arising out of or in connection with this contract in respect of any contract interpretation, claim of breach of contract or other assertion of legal rights or obligations not resolved under the internal dispute resolution and mediation provisions of Clause 16 and Clause 17.1, respectively, shall be referred to and finally resolved by arbitration before a single arbitrator. The award of the arbitrator shall be final and binding upon both parties to the Client Services Agreement.

In the event the parties cannot agree upon and appoint an arbitrator within two (2) Business Days from the date that a party raised an issue under this Clause, the parties shall refer the matter to The Canadian Foundation for Dispute Resolution, or such mediation or arbitration centre as may be mutually agreed upon in accordance with the Commercial Arbitration Rules of The Canadian Foundation for Dispute Resolution. The arbitration shall:

- to the extent possible, and with the necessary modifications as determined by the arbitrator, be administered in accordance with the Commercial Arbitration Rules of The Canadian Foundation for Dispute Resolution;
- (ii) be conducted in Vancouver, British Columbia, Canada; and
- (iii) be conducted in English.

Notwithstanding the above, no one shall be nominated to act as an arbitrator who is in any way financially interested in the business affairs of either BC Gas or CustomerWorks or any of their respective Affiliates.

The arbitrator shall issue a written award that sets forth the essential findings and conclusions on which the award is based. The arbitrator will allow discovery as required by law in arbitration proceedings.

If the arbitrator fails to render a decision within thirty (30) days following the final hearing of the arbitration, any party to the arbitration may terminate the appointment of the arbitrator and a new arbitrator shall be appointed in accordance with these provisions. If the parties are unable to agree on a new arbitrator or if the appointment of a new arbitrator is terminated in the manner provided for above, then any party to this Agreement shall be entitled to apply to a judge of the British Columbia Supreme Court to appoint an arbitrator and the arbitrator so appointed shall proceed to determine the matter mutatis mutandis in accordance with the provisions of this Clause.

The arbitrator shall have the authority to award:

- a) money damages;
- b) interest on unpaid amounts from the date due;
- c) specific performance; and
- d) permanent relief.

The costs and expenses of the arbitration proceedings, but not those incurred by the parties in connection with their attendance and representation at the arbitration, shall be shared equally, unless the arbitrator determines that a specific party prevailed. In such a case, the non-prevailing party as determined by the arbitration shall pay all costs and expenses of the arbitration proceedings, but not those of the prevailing party.

The parties will continue to fulfill their respective obligations pursuant to this Client Services Agreement during any arbitration in accordance with this Clause 17.2.

If either BC Gas or CustomerWorks is or becomes involved in any legal proceeding with any other party and the factual or legal issues of such legal proceeding require the joinder of either or both BC Gas or CustomerWorks in that proceeding, then on the application of either party to the court having jurisdiction the court may, if it determines that it is just and convenient in all the circumstances, order a stay of the arbitration proceedings or order that the above provisions regarding arbitration are not applicable, in which case any or all disputes referred to shall be determined by that court or a court of competent jurisdiction in British Columbia such that all factual and

legal issues between CustomerWorks and BC Gas shall be resolved in one forum.

18. EARLY TERMINATION

18.1 **Definitions**

For the purpose of this Clause:

- (a) **"Nominated Arbitrator**" shall mean the arbitrator selected by the parties for the Expedited Arbitration in accordance with Clause 1.1(s);
- (b) "Service Level Termination Problem" shall mean a failure by CustomerWorks to meet a service level target as set out in the "Performance Measures and Penalties" clause in each of the Schedules:
 - (i) which is within CustomerWorks' scope of responsibility;
 - (ii) which is predominately within CustomerWorks' control; and
 - (iii) where the resolution of such problem is predominantly within CustomerWorks' control.
- (c) **"Specified Time Period**" shall mean a period of time within which CustomerWorks must respond to a problem as specified in each relevant Schedule, or as may otherwise be agreed to by the parties acting reasonably.

18.2 **Termination of a Schedule With Cause**

(a) Service level qualifiers:

CustomerWorks will not be responsible for any failure to meet Service levels where such failure is attributable to:

- (i) the actions or inactions of BC Gas or its Affiliate or a BC Gas designated third party or a subcontractor or agent of BC Gas; or
- (ii) a delay in getting any required approval from or in respect of BC Gas.
- (b) Service Level Termination Problems
 - (i) If BC Gas believes that CustomerWorks has failed to resolve a Service Level Termination Problem within a Specified Time Period it shall notify CustomerWorks in writing within fifteen (15) days of the last day of the Specified Time Period.

- If CustomerWorks is in agreement with BC Gas that it (ii) has failed to resolve a Service Level Termination Problem within the Specified Time Period, it shall so commit in writing and CustomerWorks shall take commercially reasonable corrective action to cure such failure and to prevent further failures bv Service CustomerWorks to resolve that Level Termination Problem within the Specified Time Period.
- (iii) In the event that CustomerWorks and BC Gas fail to agree upon whether CustomerWorks has failed to resolve a Service Level Termination Problem within the Specified Time Period, then the parties shall submit the Service Level Termination Problem to Expedited Arbitration.
- (iv) If it is determined by the Nominated Arbitrator that CustomerWorks has failed to resolve a Service Level Termination Problem within the Specified Time Period, CustomerWorks shall:
 - (A) take corrective steps as recommended by the Nominated Arbitrator;
 - (B) pay BC Gas's reasonable legal costs associated with the Expedited Arbitration; and
 - (C) acknowledge that the Service Level Termination Problem be counted in accordance with 18.2(b) (i).
- (v) If it is determined by the Nominated Arbitrator that CustomerWorks has not failed to resolve a Service Level Termination Problem within the Specified Time Period, then:
 - BC Gas shall revoke its allegation that CustomerWorks failed to resolve a Service Level Termination Problem within the Specified Time Period;
 - (B) BC Gas shall take corrective steps as recommended by the Nominated Arbitrator; and
 - (C) BC Gas shall pay CustomerWorks' reasonable legal costs associated with the Expedited Arbitration.
- (c) BC Gas may terminate a Schedule upon sixty (60) days written notice to CustomerWorks, for CustomerWorks' failure to resolve Service Level Termination Problems with respect to

that Schedule being sought to be terminated within the Specified Time Periods on:

- (i) two or more occasions during any period of six (6) consecutive months; or
- (ii) four or more occasions in any twelve (12) month period.

18.3 **Termination of the Client Services Agreement with Cause**

BC Gas may terminate this Client Services Agreement at its sole option immediately upon providing notice in writing to CustomerWorks:

- (a) if CustomerWorks is in material breach of the Client Services Agreement as a whole (and not only one or more of the individual Schedule(s)) and such breach is not remedied to the reasonable satisfaction of BC Gas within sixty (60) days from the date of written notice by BC Gas to CustomerWorks; or
- (b) if CustomerWorks becomes, or threatens to become subject to any insolvency administration and such insolvency administration is not remedied within sixty (60) days from the date of the written notice by BC Gas to CustomerWorks.

In the event BC Gas terminates this Client Services Agreement in accordance with Clause 18.3 (a), BC Gas shall pay CustomerWorks the net book value of the licenses subject of the License Agreement less any amount outstanding and owing from BC Gas to CustomerWorks hereunder. CustomerWorks shall forthwith assign its interest in the License Agreement and relevant maintenance agreement then in force and the escrow agreement relevant to the License Agreement and/or maintenance agreement to BC Gas and from Customer Works.

In the event BC Gas terminates this Client Services Agreement in accordance with Clause 18.3(b), CustomerWorks shall forthwith assign its interest in the License Agreement and relevant maintenance agreement then in force and the escrow agreement relevant to the License Agreement and/or maintenance agreement to BC Gas.

18.4 BC Gas' Rights Upon Termination of the Client Services Agreement

Upon termination of this Client Services Agreement by BC Gas or CustomerWorks, all accrued obligations or liabilities to pay for Client Services provided prior to termination will remain in effect.

If this Client Services Agreement is terminated by BC Gas in accordance with Clause 18.3, in addition to terminating this Client Services Agreement, BC Gas:

- (a) may, subject to Clause 13.7, recover from CustomerWorks the amount of any direct loss or damage sustained as a result of the termination;
- (b) subject to Clauses 12, 14, 18.5, and 19, may be regarded as discharged from any further obligations under this Client Services Agreement;
- (c) may, subject to the terms hereof, pursue any additional or alternative remedies provided by law; and
- (d) shall not be responsible to CustomerWorks for any losses, lost profits, failure to realize income, indirect or consequential damages or costs, and any amounts in excess of the payments previously received by CustomerWorks to the date of termination other than all accrued obligations on liabilities to pay for Client Services provided prior to termination.

18.5 BC Gas' Rights Upon Termination of All or Any Schedules

Upon termination of all or any of the Schedules by BC Gas or CustomerWorks, all accrued obligations or liabilities to pay for Client Services provided prior to termination will remain in effect.

Upon termination or expiration of all or any of the Schedules, CustomerWorks will provide commercially reasonable assistance and use its commercially reasonable efforts to return to BC Gas, or its designates, in an orderly and expeditious manner all of the BC Gas Property, as determined under Clause 7, and in accordance with Clause 18.8, at BC Gas' cost unless the termination is under Clause 18.2.

18.6 Upon Termination/Expiration of the Client Services Agreement

Upon termination or expiration of the Client Services Agreement, CustomerWorks will, without additional cost to BC Gas, provide all reasonable assistance and use its commercially reasonable efforts to returning to BC Gas, or its designates, in an orderly and expeditious manner all of BC Gas Property, as determined under Clause 7, and in accordance with Clause 18.7.

18.7 Return of BC Gas Property Upon Termination of this Client Services Agreement

Upon termination of this Client Services Agreement, howsoever occasioned, BC Gas will have the right to require CustomerWorks to do any one or more of the following:

(a) to deliver to BC Gas all copies of BC Gas Property then in CustomerWorks' possession or control; and

(b) to erase or destroy all or any of BC Gas Property then in CustomerWorks' possession from whatever media they are stored.

If upon termination of this Client Services Agreement, howsoever occasioned, BC Gas requires CustomerWorks to deliver up any of BC Gas Property on magnetic media, CustomerWorks will:

- (c) deliver up such BC Gas Property on industry compatible magnetic media at BC Gas' cost unless the termination is under Clause 18.3; and,
- (d) supply to BC Gas free of charge all Data and information relating to Customers held by CustomerWorks on BC Gas' behalf in a data file acceptable to the customer information system used by CustomerWorks in place at the date of termination.

Except where the Client Services Agreement is terminated by BC Gas under Clause 18.3, CustomerWorks' obligations under Clause 18.7 will be conditional upon BC Gas having paid all fees then due to CustomerWorks under the terms of the Client Services Agreement.

18.8 Return Of BC Gas Property Upon Termination Of Any or All Schedule(s)

Upon termination of any Schedules, howsoever occasioned, BC Gas will have the right to require CustomerWorks to do any one or more of the following:

- (a) to deliver to BC Gas all copies of BC Gas Property then in CustomerWorks' possession or control which relate solely to such Schedules; and
- (b) to erase or destroy all or any BC Gas Property then in CustomerWorks' possession which relate solely to such Schedules from whatever media they are stored.

If upon termination of any Schedules, howsoever occasioned, BC Gas requires CustomerWorks to deliver up any of BC Gas Property, on magnetic media which relate solely to such Schedules, CustomerWorks will:

- (c) deliver up such BC Gas Property on industry compatible magnetic media in a format acceptable to BC Gas at BC Gas' cost unless the termination is under Clause 18.2; and,
- (d) supply to BC Gas free of charge all Data and information relating to Customers held by CustomerWorks on BC Gas' behalf in a data file acceptable to the customer information

system used by CustomerWorks in place at the date of termination.

Except where any Schedules are terminated by BC Gas as a result of any material breach by CustomerWorks of its obligations under the Schedule(s), CustomerWorks' obligations under this Clause 18.8 will be conditional upon BC Gas having paid all fees then due to CustomerWorks under the terms of such Schedules.

18.9 Winding Up Assistance

Subject to the following sentence, BC Gas may, by ninety (90) days written notice to CustomerWorks before the effective termination of all of the Schedules, defer the actual termination date of the Schedules, or any part of them, up to six (6) months to enable BC Gas to make appropriate provision for the handling of the functions performed by CustomerWorks without loss of performance. Any extension will be on the terms and conditions contained herein and in the Schedules, except for pricing which will be as agreed by the parties. CustomerWorks is only required to provide one such extension under the terms and conditions of this Client Services Agreement.

18.10 If BC Gas fails to make payment to CustomerWorks when due under this Client Services Agreement, other than in cases where BC Gas disputes the amount or entitlements of CustomerWorks to some or all of a payment, and such breach is not remedied within ten (10) days from the date payment is due, CustomerWorks, may without prejudice to other rights or remedies it has, terminate this Client Services Agreement by giving BC Gas sixty (60) days written notice.

18.11 Express Rights of Termination Only

The sole rights of the parties to terminate this Client Services Agreement or any of the Schedule(s) are as set out above.

19. **CONFIDENTIALITY**

CustomerWorks will keep confidential all Customer information, BC Gas Property, processes and procedures provided to it by BC Gas or information generated from new Customers whether or not it is described or marked as confidential and will abide by all relevant privacy legislation.

CustomerWorks will keep confidential all such Customer information and other Data and other information that is provided to it by BC Gas and described or marked as confidential and will only disclose such information to:

(a) those authorized to receive the Data; and

(b) CustomerWorks' personnel and subcontractors with a need to know or use the Data.

BC Gas shall keep confidential all Data and information provided to it by CustomerWorks that is disclosed and marked confidential, or which it is otherwise aware is confidential.

Neither party will be required to keep confidential information or Data supplied to the other which is in the public domain or which in the future enters the public domain through no fault of the recipient; which is already known to the recipient at the time of its disclosure to the recipient; which, following its disclosure, is received by the recipient without obligation of confidentiality from a third party who the recipient had no reason to believe was not lawfully in possession of that information free of any obligation of confidence; which must be disclosed by compulsion of law; or which is independently developed.

The parties will use commercially reasonable good faith efforts to cooperate and notify and support each other in responding to and resisting, if possible, any public disclosure of sensitive information, pursuant to applicable freedom of information legislation or otherwise.

The terms of this Client Services Agreement, proposed and/or accepted Scope Changes and the Protocol are deemed to be confidential and shall only be disclosed to the extent required by law, judicial or administration process.

20. NOTICES

Any notices or communications to be given or made hereunder will be deemed to be properly given or made:

- (a) if hand delivered to the intended recipient to its last known address and marked for the attention of the following persons or offices; or
- (b) on the day of transmission of a facsimile message embodying such notice or communication supported by a confirmation of receipt notice.

Such notice will be made to the following persons and addresses:

CustomerWorks:

CustomerWorks Limited Partnership 80 Allstate Parkway Markham, Ontario, L3R 6H3 Facsimile: (905) 943-6268 Attention: President

BC Gas:

BC Gas Utility Ltd.

1111 West Georgia Street Vancouver, B.C., V6E 4M4 Facsimile: (604) 443-6626 Attention: BC Gas Administrator

Either party may change its address for notice by providing notice of such change by any of the methods provided in this Clause. Delivery of a facsimile notice will be deemed to be delivery of the original notice.

21. **AMENDMENTS**

No amendment, modification, supplement, or other purported alteration of this Client Services Agreement will be binding upon the parties hereto unless it is in writing and is signed on behalf of the parties by their duly authorized representatives and unless such amendment, modification, supplement or alteration expressly references this Client Services Agreement.

22. SUBCONTRACTING

- 22.1 CustomerWorks shall notify BC Gas promptly and in writing, of any proposed subcontractors where the work subcontracted:
 - (a) results in a material change to the delivery of the Client Services;
 - (b) represents a substantial part of the Client Services; or
 - (c) is a material element of the Client Services.
- 22.2 BC Gas shall have the right to reject the assignment to any such subcontractors within five (5) Business Days of receiving such notice, subject to BC Gas acting reasonably.
- 22.3 If CustomerWorks determines that BC Gas' reasons for rejecting such subcontractors are unreasonable, it shall submit the matter to the internal dispute resolution process and any resolution under such process shall be final and binding upon the parties.

23. **RECORDS AND RIGHTS TO AUDIT**

- 23.1 With respect to Volume Adjustments, Additional Services and Additional Fees, CustomerWorks shall maintain accurate and complete records of its time, activities, finances and operations relating to this Client Services Agreement ("Records") in accordance with Canadian generally accepted accounting principles.
- 23.2 CustomerWorks agrees that BC Gas, or its authorized representative, shall upon reasonable notice, have access to and the right to audit the Records.

- 23.3 The right to audit shall include the right to examine, copy or transcribe all documents, reports, records, worksheets and databases of CustomerWorks relating to the provision of the Client Services.
- 23.4 Inspection may take place at the office of CustomerWorks or at any other location where the Records are kept. BC Gas shall be entitled to perform such audit only during CustomerWorks' regular business hours during the Term of the Client Services Agreement and, in connection with the Client Services only, for a period of seven (7) years from the termination date.

24. **RECRUITMENT AND SOLICITATION**

Both parties covenant and agree that during the Term and any Additional Term and for a period of one (1) year thereafter, they will not, directly or indirectly, hire, retain or engage as an employee, or in any capacity whatsoever, any person, firm, company or other entity whatsoever who is, or who was at the time, so engaged by the other party for the purposes of the Client Services Agreement without the prior written consent of the other party.

25. ENTIRE AGREEMENT

This Client Services Agreement, together with any annexes, Schedules, addenda and writings expressly referred to, constitutes the entire agreement between the BC Gas and CustomerWorks with respect to the subject matter hereof, and supersedes all prior agreements, proposals, or other communications between them, relative to the subject matter of this Client Services Agreement. There are no terms, conditions or warranties express or implied governing BC Gas and Customer Works hereunder other than those contained in this Client Services Agreement.

26. **TIME OF THE ESSENCE**

The parties agree that time is of the essence in all aspect of the provision of the Client Services.

27. **PRECEDENCE OF INTERPRETATION**

If there is any conflict between the terms of the 31 Clauses of this agreement and those specified in the Schedules, the terms as stated in the Clauses herein will prevail.

28. NO WAIVER

Any waiver by either party of any right or obligation under this Client Services Agreement will not be effective unless made in writing and will not be considered to be a waiver of any other breach of the same obligation.

29. **RIGHTS CUMULATIVE**

Any express statement of a right of BC Gas or CustomerWorks under this Client Services Agreement is without prejudice to any other right of BC Gas or CustomerWorks expressly stated in this Client Services Agreement or arising at law.

30. ASSIGNS AND SUCCESSORS

This Client Services Agreement will enure to the benefit of and be binding on the respective successors and permitted assigns of each of the parties hereto. This Client Services Agreement may not be assigned by CustomerWorks without the previous written consent of BC Gas which may not be unreasonably withheld.

Provided that BC Gas is not in default under this Client Services Agreement and that the assignee specifically assumes all of BC Gas' obligations hereunder BC Gas may assign its interest in this Client Services Agreement with the prior written consent of CustomerWorks. Upon such assignment, BC Gas shall be released of any and all of its obligations under the Client Services Agreement as of the date of such assignment, subject to fulfillment by BC Gas of any financial obligations incurred prior to the date of such assignment.

31. COUNTERPARTS/FACSIMILE

- 31.1 This Client Services Agreement may be executed in counterparts with the same effect as if both parties had signed the same document. The counterparts will be construed together and will constitute one and the same agreement.
- 31.2 This Client Services Agreement may be executed by the parties and transmitted by facsimile transmission and if so executed and transmitted this Client Services Agreement will be for all purposes as effective as if the parties had delivered an executed original Client Services Agreement provided that an executed original counterpart of this Client Services Agreement is received by the other party within seven days of the transmission by facsimile by the first party.

IN WITNESS WHEREOF, the parties have executed this Client Services Agreement, on the date set forth below.

CUSTOMERWORKS LIMITED PARTNERSHIP

Per: _____

Per: _____

Dated:_____

BC GAS UTILITY LTD.

Per: _____

Per: _____

Dated:

CLIENT SERVICES AGREEMENT



December 2001

TABLE OF CONTENTS

CLAUSE

PAGE

1.	DEFINITIONS	.1
2.	SCOPE OF SERVICES	.1
3.	SERVICE GUIDELINES	. 4
4.	REPORTS	. 6
5.	CUSTOMER ISSUE MANAGEMENT	. 7
6.	PRICING	. 7
7.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES	8

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client ServicesAgreement.

2. SCOPE OF SERVICES

- 2.1. CustomerWorks agrees to provide BC Gas with the following Customer Contact Services for all BC Gas' accounts in accordance with the policies and procedures outlined in the Protocol and as set out below with the exception of Services specifically defined in Schedule E, Industrial and Off System Support Services. Generally, Billing Support Services. The scope of Services and level of performance documented in this Services Schedule is intended to be consistent with the level of service BC Gas currently provides to its customers.
- 2.2. Generally, CustomerWorks will provide all Customer contact services ("Customer Contact Services") related to:
 - (a) **Emergency Service Call Handling**. Emergency service call handling components of the Customer Contact Services include activities involved in responding to emergency order requests and creating a work order for dispatch by BC Gas. Specific information regarding the nature of the emergency will be collected and input in the Customer Systems and advice will be provided to the caller to ensure their safety until BC Gas' inspector arrives;
 - (b) **Billing Inquiries**. The billing inquiry component of the Customer Contact Services include activities involved in responding to inquiries regarding BC Gas' Customer accounts including:

- (i) updating of Customer information in the Customer Information System ("CIS") and related systems;
- (ii) investigation and correction of billing or payment errors;
- (iii) issuing special meter reading and meter service requests;
- (iv) explaining rate changes; and
- (v) recording Customer meter readings;
- (c) **Payment/Billing Programs**. The payment/billing program component of the Customer Contact Services shall include activities involved in initiating, canceling and responding to inquiries for billing programs such as the equal payment plan ("EPP"), and pre-authorized payment plan ("PPP");
- (d) **Customer Move Orders**. The Customer move order component of the Customer Contact Services shall include activities involved in:
 - (i) creating a new account; and/or
 - (ii) finalizing an existing account at the Customer's request.
- (e) **Customer Complaints**. The Customer complaint component of the Customer Contact Services shall include activities involved in responding to and documenting Customer complaints;
- (f) **Customer Education**. The Customer education component of the Customer Contact Services shall include activities involved in responding to questions regarding gas safety, deregulation, gas utilization, energy efficiency, demand side management programs, rate changes, or any other pertinent information. CustomerWorks shall respond through live interaction with the Customer or through the use of the interactive voice response ("IVR") and brochure mailings;
- (g) **Gas Service Line and Meter Requests**. The gas line service and meter request component of Customer Contact Services shall include activities involved in responding to Customers' requests for:

- (i) new gas service line (including meter set); and
- (ii) requests to abandon existing gas service line and/or meter set.

CustomerWorks will issue the order in the Customer Information Systems ("CIS") for dispatch by BC Gas in accordance with the Protocol. This activity includes the collection of Customer information for input into the CIS which is forwarded to BC Gas' operations support group as required;

- (h) **Key Account Handling**. Select Customer groups may require special handling. For example, the builder call component of the Customer Contact Services shall include activities involved in issuing orders for setting a meter, pre-inspections, new service unlocks, and installation of new services; and
- (i) **Interactive Voice Response**. CustomerWorks shall maintain and operate the IVR system in accordance with the requirements specified by BC Gas in the Protocol.

2.3. Customer Contact

CustomerWorks shall provide Customer Contact Services in response to all Customer contact issues including:

- (a) telephone calls to contact Customer Contact Service centres which will be handled by:
 - (i) IVR; or
 - (ii) a Customer service representative;
- (b) e-mail and other electronic correspondence; and
- (c) written and faxed correspondence.

2.4. CustomerWorks' Responsibilities

CustomerWorks will:

(a) perform the Customer Contact Services with sufficient and adequately trained staff in accordance with mutually agreeable policies and practices and sufficient to meet the service levels, all of which are set out in this Schedule and the Protocol;

- (b) support and maintain BC Gas specific call pathing options within the call centre environment, to be changed from time to time as directed by BC Gas in accordance with the Protocol;
- (c) consult with BC Gas through BC Gas' co-ordinator or the coordinator's designate on matters related to the Services;
- (d) ensure that adequate and appropriate systems, Customer contact technology and equipment are available to meet the Performance Measures;
- (e) provide a priority service for emergency telephone calls from BC Gas' Customer's to ensure the performance measure for emergency calls is met. Emergency service orders will be issued in accordance with the Protocol;
- (f) provide appropriate and timely support through expert personnel and/or technology as required for special campaigns and Customer education programs;
- (g) consult with BC Gas prior to enacting any changes to the service levels resulting from unusual or emergency situations whenever practical to do so. In the event a decision needs to be made by CustomerWorks immediately, CustomerWorks will communicate to BC Gas as soon as reasonably possible and in any event within twenty-four (24) hours; and
- (h) provide access to BC Gas for monitoring purposes on request.

3. SERVICE GUIDELINES

3.1. Service Levels

CustomerWorks will:

- (a) record and update accurately all Customer, premise and account information in the CIS;
- (b) provide quality call handling, through internal measures, as defined in the Protocol in accordance with Section 4.3 below;
- (c) maintain existing BC Gas call back metrics of 80% of Customers not calling back more than once per month;
- (d) complete all post call processing in a timely fashion;

- (e) from January 1, 2002 to June 30, 2002 CustomerWorks will maintain the emergency service order queue during the period Monday – Friday, 7:00 am – 6:00 pm Pacific Standard Time ("PST"). For all other times CustomerWorks will transfer calls to BC Gas Emergency Dispatch or as otherwise set out in the Protocol;
- (f) from January 1, 2002 to June 30, 2002 CustomerWorks will maintain the non-emergency service order queues during the period Monday – Friday 7:00 am – 6:00 pm PST;
- (g) beginning July 1, 2002 CustomerWorks will maintain the emergency service order queue 7 days per week for 24 hours per day ("7 x 24"). Emergency calls will be handled in BC during the call centre hours outlined in Section 3.1(f) above;
- (h) beginning July 1, 2002 CustomerWorks will maintain the nonemergency service order queues during the period Monday – Friday 7:00 am – 8:00 pm and Saturday 9:00 am – 5:00 pm PST;
- (i) obtain and maintain Performance Measures described in Section 6.3 below;
- (j) will use best efforts to resolve all calls at the first point of contact. The established contact escalation process set out in the Protocol will ensure that calls referred to BC Gas staff will be a last resort, except where BC Gas determines that specific calls should be referred to a special subject matter expert or sales representative within BC Gas;
- (k) send literature and correspondence related to Customer Contact Services provided by BC Gas or CustomerWorks to the Customer. This includes maintaining form letters and an inventory of BC Gas literature available for distribution to Customers. Provide four (4) business day turnaround on all requests for in-stock literature prior to July 1, 2002 and two (2) business day turnaround thereafter; and
- (l) notify BC Gas of any changes to CustomerWorks' procedures or policies in the provision of Customer Contact Services, and obtain BC Gas agreement prior to such changes, where such changes will impact Customer service, BC Gas' operations or BC Gas' systems, in accordance with the Scope Change procedures set out in the Client ServicesAgreement.

3.2. BC Gas' Responsibilities

BC Gas will:

- (a) provide all necessary Data, schedules, Activity Forecasts, special forms or other information to CustomerWorks in accordance with the Protocol;
- (b) consult with CustomerWorks through CustomerWorks' Account Manager or his designate on matters related to the Services;
- (c) ensure the accuracy, legibility, completeness and timeliness of all information supplied to CustomerWorks at the commencement of the Client Services Agreement;
- (d) permit CustomerWorks' employees and agents, as may be authorized by CustomerWorks, access to BC Gas' Data at such times and for such purposes as is necessary to allow CustomerWorks to perform its obligations under this Schedule;
- (e) as reasonably required, provide information in addition to that specified herein as CustomerWorks may occasionally require in performing the Services;
- (f) provide CustomerWorks with a minimum of two (2) hours notice of it's intent to monitor call centre activity to ensure resource availability; and
- (g) notify CustomerWorks of any changes to BC Gas' procedures which impact the provision of Services through the change control process outlined in Clause 15 of the Client Services Agreement prior to such changes, where such changes will impact CustomerWorks' operations.

3.3. **Policies and Practices**

- 3.3.1 CustomerWorks shall deliver the Customer Contact Services in accordance with the Protocol.
- 3.3.2 BC Gas will:
 - (a) retain final approval rights for scripts, training materials and other materials for any Customer communications including approval of delivery method or channel;
 - (b) retain the right to monitor call quality.

4. **REPORTS**

CustomerWorks shall provide all management reports to BC Gas in accordance with the Protocol which may be amended, from time to time.

5. CUSTOMER ISSUE MANAGEMENT

CustomerWorks and BC Gas shall work together to resolve Customer issues in a timely manner. All Customer issues and resolutions will be tracked and reported in accordance with the Protocol. Customer issues shall be resolved as follows:

- (a) all issues raised by Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the Customer. Any issues requiring escalation to BC Gas for final resolution will be forwarded to a person appointed by the BC Gas Administrator within BC Gas as soon as reasonably possible;
- (b) all issues raised by Customers directly to BC Gas or the British Columbia Utilities Commission regarding Services provided by CustomerWorks shall be forwarded to a single contact person as designated by the CustomerWorks Account Manager. Depending on the nature of the issue CustomerWorks will be asked to:
 - (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible, or
 - (ii) provide a draft response in writing to BC Gas;

All issues shall be resolved or responded to within five (5) Business Days of receipt from BC Gas or in a time frame agreed to with BC Gas or BC Gas Customer.

- (c) all correspondence sent directly to BC Gas Customers byCustomerWorks shall be on BC Gas letterhead; and
- (d) all issues and resolutions in items a) and b) shall be tracked and reported monthly to the BC Gas Administrator.

6. PRICING

6.1. CustomerWorks will provide the Services described in this Schedule for five (5) years at the fixed fees (the "Base Fees") shown in the following table:

	Duse i cesi i cui					
	2002	2003	2004	2005	2006	
	Base Fee	Base Fee	Base Fee	Base Fee	Base Fee	
Customer Contact Services	\$13,745,180	\$16,857,047	\$16,857,047	\$16,857,047	\$16,857,047	

Base Fees/Year

The Base Fees will be adjusted monthly in January 2003 to reflect changes to the number of Customers as defined in Section 8 of the Client Services Agreement.

7. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

- 7.1. The following table outlines the Performance Measures for all Customer Contact Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet Performance Measures to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.2.
- 7.2. The Performance Measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Notwithstanding the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Client Services Agreement.

7.3. Customer Contact Service

Service	Performance Measure	Deficiency Period	Cure Period	Penalty
General/Billing Inquiry	75/30*	1 month	1 month	\$25,000/ month
	65/30*	1 month	1 month	\$50,000/month
Emergency	95/30*	1 month	1 month	\$25,000/ month
	70/30*	1 month	1 month	\$50,000/month
Other Inquiries – email,	98%	2 consecutive months	1 month	\$10,000/month
web, fax, mail, etc.	Response in four (4) Business Days for the period of January 1, 2002 to June 30, 2002. Respond in two (2) Business Days for the period of July 2002 to the end of the term of this Agreement			
Call Quality	95% based on current format	2 consecutive months	1 month	\$25,000/month
All Trunks Busy	99% availability	1 month	1 month	\$25,000/month
Total Inbound Access	Abandon below 40%	2 consecutive months	1 month	\$25,000/month

"Cure Period" shall mean the time allotted to CustomerWorks to resolve or rectify the deficiency.

"Penalty" shall mean that amount charged to CustomerWorks at the time the deficiency is identified and shall apply for each month the deficiency occurs including the Cure Period. Failure to meet Performance Measures for more than 2 consecutive months will result in repetitive doubling of the monthly penalty until the deficiency is resolved or rectified.

* General / billing inquiry and emergency telephone service levels are the percentage of service calls answered or abandoned in 30 seconds of less.

If the actual call volumes exceed the Activity Forecast in any month by greater than 10%, neither a deficiency nor a penalty will be charged to CustomerWorks. Activity Forecasts will be reviewed and revised monthly in accordance with the Protocol.

Table Of Contents

Clause

Page

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	6
4.	REPORTS	11
5.	CUSTOMER ISSUE MANAGEMENT	11
6.	PRICING	12
7.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIE	S.12

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

2. SCOPE OF SERVICES

2.1 General

CustomerWorks agrees to provide BC Gas with the following Billing Support Services for all BC Gas' accounts in accordance with the policies and procedures outlined in the Protocol and as set out below. The scope of Services and level of performance documented in this Services Schedule is intended to be consistent with the level of Service BC Gas currently provides to its Customers.

CustomerWorks shall provide all billing support services ("Billing Support Services") required by BC Gas for the entire "meter to cash" process with the exception of Services specifically defined in Schedule E, Industrial and Off System Support Services. Generally, Billing Support Services shall include:

- (a) billing;
- (b) payment processing;
- (c) payment transfer to BC Gas;
- (d) Customer accounting;
- (e) information and interpretation of Data and processes in response to BC Gas staff inquiries; and
- (f) systems support.

2.2 Billing

CustomerWorks shall provide billing for metered and unmetered products and services for all Customers of BC Gas in adherence to the Tariff and in accordance with the Protocol. The Billing Support Services shall be supported by the Customer Information System ("CIS") and shall include the following:

(a) preparing meter reading and billing schedules to support monthly billing in accordance with the Protocol;

- (b) sending and receiving meter reading Data and managing exceptions;
- (c) providing support for meter readers;
- (d) calculating Customer bills by:
 - (i) calculating usage conversion factors and usage including estimated usage;
 - (ii) reviewing and resolving reading and premise exceptions which have stopped during the billing process;
 - (iii) reviewing and resolving billing exceptions, including, but not limited to, switched and non-registering meters;
 - (iv) applying the appropriate tariff and rate schedules;
 - (v) calculating and applying the applicable taxes and franchise fees;
 - (vi) applying appropriate special charges including application fees and calculating and applying late payment charges;
 - (vii) calculating and applying security deposits to Customer accounts;
 - (viii) applying appropriate adjustments and producing corrected bills as required;
 - (ix) calculating and revising equal payment plan installments and periodically reconciling to actual gas used charges and taxes;
 - (x) applying charges for unmetered products and services including:
 - A. a standing periodic charge;
 - B. a one-time charge; and
 - (xi) calculating the balance due on bills and aging arrears balances;
- (e) producing and distributing the bill including:
 - (i) formatting, printing and delivering the bill. Delivery methods may include:
 - A. mail;
 - B. electronic presentment;

- (ii) selective insertion of return envelopes and up to 5 different BC Gas brochures per billing workday and per Company;
- (iii) selective printing of messages on the bill;
- (iv) sending bill to the Customer and paying any associated costs such as postage, bill stock and envelopes; and
- (v) consolidating the invoices for a number of meter premises or meters to be billed and paid by a single Customer.

Bill presentation will be in a form similar to that attached hereto in Appendix "B2", unless a change is requested or approved by BC Gas;

- (g) calculating and reporting charges and taxes for BC Gas owned premises;
- (h) coordinating the meter dispute process;
- maintaining premises information and verifying accuracy of CIS taxation jurisdiction boundary information by comparing to BC Gas records;
- (j) initiating fieldwork requests for work related to billing exceptions and meter identification; and
- (k) calculating fees due to municipalities and forwarding information to BC Gas for cheque production and distribution.

2.3 Payment Processing

The bill payment processing aspect of the Billing Support Services shall include the following:

- (a) Payment Processing
 - (i) processing payments received on Customer accounts;
 - (ii) processing returned payments and any associated charges;
 - (iii) administering BC Gas' payment options including preauthorized payment; and
 - (iv) investigating payment problems, processing adjustments and verifying and processing refunds;
- (b) Payment Options

CustomerWorks shall provide the following options for the payment or collection of accounts receivable and shall manage the

relationship with all external service providers in accordance with Protocol:

- (i) mail payment;
- (ii) drop box payment;
- (iii) payment agency payment;
- (iv) pre-authorized payment;
- (v) telephone payment;
- (vi) internet payment;
- (vii) financial institution payment; and
- (viii) collection agency payment;

2.4 Payment Transfer to BC Gas

The payment transfer aspect of the Billing Support Services provided by CustomerWorks shall include:

- (a) daily electronic transfer of all payments collected on BC Gas' behalf and Customer payments returned; and
- (b) reports on payment transfer in accordance with the Protocol.

2.5 Customer Accounting

The Customer accounting aspect of the Billing Support Services provided by CustomerWorks shall include the updating of accounting records related to Customer billing and payments, and specifically shall include:

- (a) allocating charges, payments and adjustments to the appropriate accounting codes of BC Gas; and
- (b) reporting accounting code totals to BC Gas.

2.6 Information and Interpretation of Data and Processes in Response to BC Gas Staff Inquiries

CustomerWorks shall provide information and interpretation services to BC Gas staff, which shall include, but is not limited to:

- (a) Tariff application;
- (b) billing Data and processes;
- (c) payment Data and processes;
- (d) meter reading Data and processes; and

(e) collection Data and processes;

2.7 Systems Support

CustomerWorks shall provide support for the Customer Systems used to provide billing, Customer contact, credit and collection, meter reading and other Client Services to BC Gas. This aspect of the Billing Support Services shall include the following:

- (a) providing expert support on the Customer Systems as defined in the Protocol;
- (b) operating and maintaining the Customer Systems, including;
 - system administration activities required to support BC Gas' operational access to Customer information during normal business hours;
 - (ii) communication of or training related to system or process changes or system availability;
 - (iii) regular review of BC Gas' Customer database to ensure optimum online performance; and
 - (iv) investigating, documenting, prioritizing and facilitating the resolution of system defects;
- (c) acting as the expert knowledge source in directing work to maintain, repair or enhance the Customer Systems used and work jointly with BC Gas on the integration of new applications or technology required by BC Gas;
- (d) managing system parameters, including tables of products and services, and chargeable rates for those products and services;
- (e) complying with and implementing changes required by regulatory agencies, including from time to time updating rate tables and implementing new billing requirements; and
- (f) supporting all reporting requirements necessary for CustomerWorks or BC Gas in the delivery of the Billing Support Services and providing BC Gas with ad hoc and special reports and Data extracts as required from BC Gas' Data in the Customer Systems.

3. SERVICE GUIDELINES

3.1 Service Responsibilities

CustomerWorks will:

- (a) perform the Billing Support Services as defined herein with sufficient staff levels and in accordance with the Protocol;
- (b) consult with BC Gas through the BC Gas Administrator or his designate on matters related to the contracted Services;
- (c) comply promptly with BC Gas' requests for billing modifications due to regulatory agency directives;
- (d) inform BC Gas in a timely manner of any problems that will affect the delivery of the Services;
- (e) notify BC Gas of any changes to CustomerWorks' procedures or policies in the provision of Billing Support Services, and obtain BC Gas agreement prior to such changes, where such changes will impact Customer service, BC Gas' operations or BC Gas' systems, in accordance with the Scope Change procedures set out in the Client Services Agreement;
- (f) obtain BC Gas' prior written consent for any changes to the Customer Systems when the change will impact Customer service or BC Gas' operations; and
- (g) provide Billing Support Services using stable, supportable technical platforms for billing related applications, versioned from time to time to reflect core application upgrades. Where required electronic interfaces linking these systems to BC Gas will be maintained and supported by CustomerWorks. Specific systems and interfaces are further described in the Protocol.

3.2 Service Levels

- 3.2.1. CustomerWorks will:
 - (a) control the execution of batch processes, billing processes, interface files, message based services, and report jobs each business day as scheduled or required;
 - (b) print and distribute reports to BC Gas each business day as scheduled or required and as outlined in the Protocol;
 - (c) calculate Customer account balances accurately;
- (d) print and mail invoices to Customers each Business Day as scheduled or required ensuring that alternative facilities are available in the case of hardware failure;
- (e) process all payments received accurately and in a timely fashion;
- (f) process all payments received before 12:00 pm PST within the same business day of receipt and credit the related payments to BC Gas' bank account;
- (g) process all refunds within four (4) business days of receipt of request by the Customer;
- (h) report all receivables and other transactions to the appropriate BC Gas accounting code accurately and in accordance with the Protocol, and support reconciliation analyses as required;
- (i) ensure that the number of days from billing to delivery to Canada Post will be no more than two (2) business days;
- (j) apply all payments received to BC Gas' current or overdue receivables;
- (k) provide 24 hour x 7 day support for all Customer Systems;
- (l) provide during regular Customer contact hours complete CIS online availability at least 95% of the time and limited or complete functionality at least 99% of the time as measured by the system administrator;
- (m) provide meter reading support coverage for the hours listed in the Protocol;
- (n) provide staff coverage for all other Billing Support areas from at least 8 am to 4 pm PST for outgoing and incoming calls with Customers, Customer contact center and BC Gas staff. Any incoming calls after 4 pm PST will at minimum be recorded by voice mail and returned the next Business Day;
- (o) respond to Customer Systems emergency situations within two (2) hours of being informed of the emergency, inform BC Gas of any situations that will affect provision of the Services for a period lasting longer than one (1) hour, including an estimate of how long the problem will last;
- (p) respond to BC Gas' request for information on existing processes, Systems or Customer complaints within two (2) Business Days;

- (q) provide adequate expert resources in a timely fashion, to design and implement Customer System or CustomerWorks process changes required by BC Gas due to regulatory or government direction, new product or service requirements, or other business requirements, based on a schedule and budget agreed to by both parties;
- (r) respond to requests for Customer System modifications and other special requests within ten (10) Business Days with an estimate of the time to delivery and expected cost;
- (s) consult with BC Gas when setting priorities in relation to other Customer System work requests;
- upon request by BC Gas selectively print bill messages or include with Customer bills the return envelope and up to five other inserts per Company each billing work day by the date requested by BC Gas and in accordance with the Protocol; and
- (u) maintain an archival of billing and consumption information as required to support audit compliance with taxation authorities, regulatory requirements and to support Customer requests.
- 3.2.2. BC Gas will:
 - (a) provide all necessary Data, rate and price schedules, activity forecasts, or other materials to CustomerWorks' key contact in the format requested, on schedule or in a timely fashion to enable CustomerWorks to provide the Billing Support Services in accordance with the Protocol;
 - (b) consult with CustomerWorks through CustomerWorks' Account Manager or designate on matters related to the Billing Support Services;
 - (c) ensure the accuracy, legibility, completeness and timeliness of rate and price schedules, forecasts or other material including Customer communication on an ongoing basis;
 - (d) permit CustomerWorks' employees and agents as may be authorized by CustomerWorks, access to BC Gas' Data at such times and for such purposes as is necessary to allow CustomerWorks to perform its obligations under the Client Services Agreement;
 - (e) as reasonably required provide information in addition to that specified in the Client Services Agreement as CustomerWorks may

occasionally require in performing the Billing Support Services and as specified in the Protocol;

- (f) work with CustomerWorks to establish a forecast of annual system development activity and provide adequate lead time for any Customer System changes required and submit to CustomerWorks a scope change as specified in the Client Services Agreement;
- (g) attempt to print and deliver bill inserts five (5) Business Days prior to the insertion start date to CustomerWorks or a third party location identified by CustomerWorks. In the event the 5 day requirement cannot be met, CustomerWorks will insert on schedule as long as the inserts are received the day before the insertion is scheduled. If they are not received the day before, a revised schedule will be negotiated between the parties;
- (h) provide notice of content for new bill messages and specifications for new stuffers in accordance with the Protocol; and
- (i) notify CustomerWorks of any changes to BC Gas' procedures which impact the provision of Services through the scope change process outlined in Clause 15 of the Client Services Agreement prior to such changes, where such changes will impact CustomerWorks' operations.

3.3 **Performance Measures**

Section 7 sets out the service Performance Measures for the Billing Support Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet Billing Support Service levels to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.2.2.

Where there are Billing Support Services performed currently, but no existing performance standards are recorded it is agreed by both parties that as soon as standards can be measured (with consideration given to industry standards) and validated by the Client Committee, they will be incorporated into this Schedule.

The service levels and measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Subject to the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Schedule.

3.4 **Planning and Budgeting**

CustomerWorks shall be responsible for all planning and budgeting of it's Billing Support Services provided pursuant to this Schedule. CustomerWorks shall work in cooperation with BC Gas to forecast activities pursuant to this schedule.

3.5 Billing Support Services Infrastructure and Support

CustomerWorks shall provide any and all Billing Support Services infrastructure and support in order to provide Billing Support Services to BC Gas. All infrastructure and support costs, including maintenance costs, are to be provided at CustomerWorks' expense. Such infrastructure and support shall include:

(a) Software and Hardware

CustomerWorks shall provide all software and hardware required for its day to day operation in its provision of the Billing Support Services.

(b) **Buildings and Equipment**

CustomerWorks shall provide all space and equipment including transportation requirements required for its day to day operations in its provisions of the Billing Support Services.

3.6 **Title to and Ownership of Data**

BC Gas shall retain title to, and ownership of, any and all Data regarding Customers and any derivatives to this Data, that is collected, generated, compiled or stored by CustomerWorks while conducting the Billing Support Services whether such Data is in paper, electronic or any other form. Copies of such Data shall be provided to BC Gas upon request.

3.7 BC Gas Bills

In accordance with and in the spirit of Clause 4.14 of the Client Services Agreement, CustomerWorks shall endeavor to reduce the cost of BC Gas' bills by identifying parties to BC Gas who potentially would share bill space. BC Gas may, in its sole and absolute discretion, elect to participate in bill sharing proposals as submitted and shall be party to any negotiations with potential proponents where issues of shared bill space are concerned.

3.8 **Emergency Response and Contingency Plans**

CustomerWorks shall have the unfettered authority to respond immediately to Billing Support Service problems and shall have full responsibility to maintain and test a contingency plan for the supply of Billing Support Services to BC Gas that ensures the uninterrupted supply of such Billing Support Services to BC Gas. CustomerWorks shall ensure that the level and type of response provided to BC Gas in the event of an emergency is equal to the level and type of response provided to BC Gas' Customers prior to the Effective Date of the Client Services Agreement. CustomerWorks shall maintain disaster recovery plans and options for BC Gas equivalent to those maintained by BC Gas for its Customers prior to the Effective Date of the Client Services Agreement.

3.9 Approval Process for Changes Affecting Customers

Changes to Billing Support Services shall be made in accordance with the scope change process in the Client Services Agreement.

4. **REPORTS**

CustomerWorks shall provide to BC Gas, management and financial reports related to Billing Support Services in accordance with the Protocol.

5. CUSTOMER ISSUE MANAGEMENT

CustomerWorks and BC Gas shall work together to resolve Customer issues in a timely manner. All Customer issues and resolutions will be tracked and reported in accordance with the Protocol. Customer issues shall be resolved as follows:

- (a) all issues raised by Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the Customer. Any issues requiring escalation to BC Gas for final resolution will be forwarded to a person appointed by the BC Gas Administrator within BC Gas as soon as reasonably possible;
- (b) all issues raised by Customers directly to BC Gas or the British Columbia Utilities Commission regarding services provided by CustomerWorks shall be forwarded to a single contact person as designated by the CustomerWorks Account Manager. Depending on the nature of the issue CustomerWorks will be asked to:
 - (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible, or
 - (ii) provide a draft response in writing to BC Gas;

All issues shall be resolved or responded to within 5 Business Days of receipt from BC Gas or in a time frame agreed to with BC Gas or BC Gas Customer.

- (c) all correspondence sent directly to BC Gas Customers by CustomerWorks shall be under BC Gas letterhead; and
- (d) all issues and resolutions in items a) and b) shall be tracked and reported monthly to the BC Gas Administrator.

6. PRICING

6.1 CustomerWorks will provide the Services described in this Schedule for five (5) years at the fixed fees (the "Base Fees") shown in the following table:

	2002	2003	2004	2005	2006
	Base Fee				
Billing Support Services	\$14,897,575	\$17,622,210	\$17,622,210	\$17,622,210	\$17,622,210

The Base Fees will be adjusted monthly beginning in January 2003 to reflect changes to the number of Customers as defined in the Client Services Agreement.

- 6.2 Customer Systems work done as a result of requests from BC Gas for a scope change, excluding changes to existing rate schedule prices and to system tables, and for ad hoc and special reports and Data extracts in excess of 600 hours per year will be charged based on the fees contained in the Professional Services Schedule attached hereto as Appendix "B1"; and
- 6.3 Incremental costs incurred by CustomerWorks due to errors made by CustomerWorks which are not recovered in the Base Fees outlined herein will not be billed to BC Gas. Incremental costs incurred by CustomerWorks due to an error made by BC Gas will be billed based on the fees set out in Appendix "B1" attached hereto. Such incremental charges are subject to prior mutual agreement as determined by the Client Committee.

7. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

7.1 CustomerWorks will provide BC Gas with a summary of CustomerWorks' performance of the measures in Section 7 within ten (10) Business Days of the month-end. Any under performance by CustomerWorks will be addressed and improvement realised by the end of month after the performance failure was reported.

7.2 Key Contacts

CustomerWorks

For questions regarding billing issues, the CustomerWorks Manager of Billing Services will be the key contact or as described in the Protocol.

For questions regarding system outages or other system problems, and the status of special projects including rate changes, the key contact will be the CustomerWorks Manager of Billing Services or a designate or as described in the Protocol.

For problems with delivery on Performance Measures or Services not meeting client expectations, the CustomerWorks Account Manager will provide the key contact. The CustomerWorks Account Manager will undertake to resolve the problems as expeditiously as possible.

For new Services, special requests, or changes to existing Services the CustomerWorks Account Manager will be the key contact or as described in Protocol.

BC Gas

For questions regarding Billing Support Services the key contact will be the BC Gas Administrator or as described in the Protocol.

7.3 Performance Measure deficiencies will be brought to the attention of CustomerWorks and appropriate measures will be implemented to correct the performance issues. The following chart outlines the Deficiency Period, Cure Period and Penalty for non-performance for the key Billing Support measures:

Billing Support Services

Service	Performance Measure	Deficiency Period	Cure Period	Penalty
Accuracy	99.9% of bills accurate	1 month	1 month	\$25,000/ month
	based upon input			

	data			
Timeliness	95% of bills delivered	1 month	1 month	\$25,000/ month
	to Canada Post within			
	two (2) business days			
	of the date that the			
	statement file is			
	created.			
Completion	95% of Customers	1 month	1 month	\$25,000/ month
-	billed within two (2)			
	business days of the			
	scheduled billing date			

"Penalty" shall mean that amount charged to CustomerWorks at the time the deficiency is identified and shall apply each month the deficiency occurs including the cure period. Failure to meet the Performance Measure for more than two (2) consecutive months will result in repetitive doubling of the monthly penalty until the deficiency is resolved or rectified. Hourly charge out rates for system personnel performing Scope Change work or work over 600 hours per year on ad hoc and special reports and Data extracts for BC Gas shall be as follows:

Senior Project Manager	\$150
Senior Consultant	\$100
Intermediate Consultant	\$85
Junior Consultant	\$70

Appendix "B1" Professional Services Schedule

Appendix "B2" Bill Format

TABLE OF CONTENTS

CLAUSES

PAGE

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	2
3.	SERVICE GUIDELINES	6
4.	CUSTOMER ISSUE MANAGEMENT AND REPORTS	10
5.	PRICING	11
6.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND	
	PENALTIES	11

1. **DEFINITIONS**

Capitalized terms which are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

- 1.1 **"Hydro**" shall mean British Columbia Hydro and Power Authority.
- 1.2 **"Interior**" shall mean BC Gas' distribution network including premises located outside the Lower Mainland, and includes the Inland, Columbia, Fort Nelson and Squamish service areas.
- 1.3 "**Lower Mainland**" shall mean BC Gas' distribution network for all premises located in Greater Vancouver and the Fraser Valley and excluding premises defined as being located in the Interior.
- 1.4 "**Meter Reading Services**" shall mean management of meter reading activities for gas meters, back-office duties, certain meter order work, and management of the meter reading hardware and software including electronic or automated meter reading applications.
- 1.5 "**Meter Services**" shall include but are not limited to meter reading, surveys, route management, fieldwork initiation of meter lock-offs, meter unlocks, orders for appliance relights, meter investigations, meter identifications, high bill complaints as well as meter order completion processing for meter sets and premises located in BC Gas' service areas. For the Lower Mainland the Meter Services shall include fieldwork activities related to meter lock-offs and high bill complaints.
- 1.6 "Off-Site Meter Reading (OMR)" shall mean meter reading requiring the use of an upgraded Hand Held Terminal (HHT) to down load data from a special Encoder Receiver Transmitter (ERT) equipped meter. These meter locations may be identified by BC Gas for special Customer requests, difficult access, and / or safety concerns.
- 1.7 **"Special Meter Reading**" shall mean a meter reading requiring a special visit to a premises outside of the regular meter reading routine, such as when a Customer moves or disputes a bill.
- 1.8 "**Special Survey Questions**" shall mean a special request by BC Gas for additional Data to be collected in conjunction with obtaining the routine meter readings. Such Data is usually collected by means of the HHT. This Data will be collected to identify and report specific information about BC Gas' metering facilities. Examples would include, but are not limited to,

gas odours, condition of protection posts, sunken risers or strained piping, specific gas code violations, types of regulating equipment on site, meter sets buried in snow or ice, general hazards, etc.

2. SCOPE OF SERVICES

2.1 General Description of Services

- (a) CustomerWorks agrees to provide BC Gas with the following Meter Services for all BC Gas' accounts in accordance with the policies and procedures outlined in the Protocol and as set out below. The scope of Services and level of performance documented in this Services Schedule is intended to be consistent with the level of Service BC Gas currently provides to its Customers.
- (b) CustomerWorks shall provide Meter Services to BC Gas under the Client Services Agreement which services shall include the capture of meter Data and meter reading Data required by BC Gas in order to support BC Gas' operational requirements as well as premise and Customer Data related to the installation of new services and meter order completion. This information includes, but is not limited to premise information, meter locations, access instructions, no read conditions and service order initiation and order closing details.
- (c) The Meter Services will be supported using stable, supportable technical platforms for meter related applications, versioned from time to time to reflect core application upgrades. Where required electronic interfaces linking these systems to BC Gas will be maintained and supported by CustomerWorks.
- (d) New premise and service order completion information will be provided by BC Gas to CustomerWorks in accordance with the schedule set out in the Protocol.
- (e) Meter reading frequency will be generally based on a bi-monthly basis subject to the special read requirements listed in the Meter Services section of the Protocol.
- (f) All work will be performed in a professional manner in accordance with the Meter Services section of the Protocol.

2.2 Specific Services

- 2.2.1 Meter Reading Services shall include:
 - (a) Regular Reads

- (i) activity forecasts will be specified in the Meter Services section of the Protocol;
- (ii) Lower Mainland reads will be synchronized to be performed in the same scheduled month as Hydro's electric meter reads; and
- (iii) other operational Data will be captured and / or updated at the time of reading to support BC Gas' operational requirements as identified in the Meter Services section of the Protocol;
- (b) Pick-Up / Partial Reads
 - Pick-Up/Partial Reads are based on specific inclusion parameters as specified in the Meter Services section of the Protocol and generate read requests in non-read months;
 - (ii) inclusion parameters are subject to change from time to time in accordance with the Meter Services section of the Protocol; and
 - (iii) activity forecasts for pick-up reads will be specified in the Meter Services section of the Protocol;
- (c) Special / Final / AMR Check Reads will be provided by CustomerWorks for the Lower Mainland service area only. The responsibility for special / final /check reads for the Interior service area will remain with BC Gas
 - (i) special / final / AMR check reads are requests that require a special visit to a premises outside of the regular meter reading schedule;
 - (ii) read requests will be supported outside the standard meter reading application as specified in the Meter Services section of the Protocol; and
 - (iii) activity forecasts for pick-up reads will be specified in the Meter Services section of the Protocol;
- (d) Surveys
 - (i) Surveys will be requested by BC Gas for the capture of specific information at the time of reading to be entered into

the handheld device in accordance with the Meter Services section of the Protocol;

- (ii) Data captured will be reported and forwarded to BC Gas for analysis; and
- (iii) for the Lower Mainland survey requests will be limited to one complete meter survey per year or up to 535,000 individual meter requests for the Meter Reading and Related Services Agreement dated December 14, 2001;
- (e) Route Management

Route Management to support meter reading route efficiency including opportunities for joint meter reading synergies with other utilities; and

- (f) Operational Reporting as specified in the Meter Services section of the Protocol;
- 2.2.2 Meter order processing services shall include:
 - (a) Meter Lock Off/ Read Meter shall apply for the Lower Mainland service area only. The responsibility for meter lock offs in the Interior will remain with BC Gas:
 - (i) meter lock offs will be generated based on operational requirements in accordance with the Meter Services section of the Protocol; and
 - (ii) activity forecasts for meter lock offs will be specified in the Meter Services section of the Protocol;
 - (b) Meter order processing:
 - (i) meter order processing will include the initiation of fieldwork as well as the data capture associated with completion of fieldwork related to BC Gas' Customer requests, internal operational requests and collection activities excluding fieldwork requiring Customer appointment scheduling related to BC Gas' meter exchange programs. Such orders will include, but are not limited to alterations to meter sets, pressure changes, additional meter(s), meter removals and relocation of meter sets as specified in the Meter Services section of the Protocol; and

- (ii) the effective date for Services associated with the Data capture related to fieldwork completion will be July 1, 2002;
- (c) High bill investigations:
 - high bill investigations include analyzing consumption history, reviewing billing factors and, if required initiating a field order to validate the current meter reading;
 - (ii) validation of meter readings will be performed by CustomerWorks for Lower Mainland Customers, Interior fieldwork will be performed by BC Gas;
 - (iii) high bill investigation field orders will be processed in accordance with the Meter Services section of the Protocol; and
 - (iv) activity forecasts for high bill investigations will be specified in the Meter Services section of the Protocol;
- (d) Initiate Meter investigations
 - (i) initiate meter investigations will include, but are not limited to initiating fieldwork for AMR equipment checks, meter disputes, switched meters, non-registering meters, stopped meters, noisy meters and general customer complaints pertaining to meter sets;
 - (ii) fieldwork associated with meter investigations will be performed by BC Gas'; and
 - (iii) activity forecasts for meter investigations will be specified in the Meter Services Protocol;
- (e) Initiate Meter identification:
 - (i) initate meter identification will be performed by CustomerWorks and will include, but is not limited to the initiation of fieldwork to determine which meter(s) serve which premise(s), whether new or existing meters as specified in the Meter Services section of the Protocol;
 - (ii) fieldwork associated with meter identifications will be performed by BC Gas'; and

(iii) activity forecasts for meter identifications will be specified in the Meter Services section of the section of the Protocol.

3. SERVICE GUIDELINES

- 3.1 CustomerWorks will:
 - (a) provide Meter Services in a manner that meets the same or similar standards of service as experienced by BC Gas' Customers prior to the execution of this Agreement and in accordance to Meter Services section of the Protocol;
 - (b) prepare monthly reading and billing schedules;
 - (c) maintain all meter reading inclusion criteria, estimating factors, meter location codes, no read codes, access codes and service order codes;
 - (d) manage the initiation and completion of Customer related fieldwork;
 - (e) ensure compliance with policies and procedures applicable to industry standards and specific BC Gas standards as identified in the Meter Services section of the Protocol;
 - (f) support new meter services technologies and enhanced metering services;
 - (g) provide meter systems support including:
 - (i) activities involved in ensuring that the meter systems are operating efficiently;
 - (ii) resolving technical problems;
 - (iii) maintaining related third party software;
 - (iv) managing server security and archiving specifications; and
 - (h) manage the capture of Customer, premise, meter and access information required for BC Gas' operational purposes; and
 - (i) maintain keys to premises held by CustomerWorks for the purpose of providing meter services in a secure and locked location when not being used for the purposes of providing the services specified in this Agreement. Authorized BC Gas personnel will be provided access to keys for operational purposes as required; and

(j) notify BC Gas of any changes to CustomerWorks' procedures or, policies in the provision of Meter Services, and obtain BC Gas agreement prior to such changes, where such changes will impact Customer service, BC Gas' operations or BC Gas' systems, in accordance with the scope change procedures set out in the Client Services Agreement.

3.2 BC Gas will:

- (a) consult with CustomerWorks through CustomerWorks' Account Manager or his designate on matters related to the Services;
- (b) ensure the accuracy, legibility, completeness and timeliness of all information supplied to CustomerWorks at the commencement of the Client Services Agreement;
- (c) permit CustomerWorks' employees and agents, as may be authorized by CustomerWorks, access to BC Gas' Data at such times and for such purposes as is necessary to allow CustomerWorks to perform its obligations under this Schedule;
- (d) as reasonably required provide information in addition to that specified herein as CustomerWorks may occasionally require in performing the Services;
- (e) respond promptly to requests for Customer service fieldwork for activities related to meter lockoffs in the interior, meter unlocks and relights, meter investigations and high bill investigations; and
- (f) notify CustomerWorks of any changes to BC Gas' procedures which impact the provision of Services through the change control process outlined in the Client Services Agreement prior to such changes, where such changes will impact CustomerWorks' operations.

3.3 **Performance Measures for Meter Services**

- 3.3.1 Regular Reads Pick Up/ Partial Reads
 - (a) Accuracy
 - (i) This measure is calculated as the number of correct regular and pick up reads captured by CustomerWorks divided by the total number of regular and pick up reads requested on a monthly basis stated as a percentage.
 - (ii) Statistical reporting summarizing the total number of correct regular reads and correct pick up reads as a percentage of

the total number of regular and the total number of pick up reads requested will be provided by CustomerWorks.

- (b) Completion
 - (i) This measure is captured at a meter reading route level and identifies the number of actual regular meter reads and pick up meter reads captured / transferred as a percentage of regular and pick up reads requested stated as a percentage on a monthly basis.
 - (ii) Statistical reporting summarising the total number of regular meter reads and the total number of pick up reads captured/transferred as a percentage of total number of regular and the total number of pick up reads requested will be provided by CustomerWorks.
- (c) Timeliness
 - (i) This measure is calculated as the number of regular and pick up meter reads captured/transferred on or before the scheduled meter reading date divided by the number of regular meter reads and pick up meter reads requested on or before the scheduled meter reading date stated as a percentage on a monthly basis.
 - (ii) Statistical reporting summarising the total number of regular meter reads and the total number of pick up reads captured/transferred as a percentage of the total number of regular meter reads and the total number of pick up reads requested on or before the scheduled meter reading date will be provided by CustomerWorks.
- 3.3.2 Special/Final/AMR Check Reads
 - (a) Accuracy
 - (i) This measure is calculated as the number of correct special, final or check reads captured by CustomerWorks divided by the total number of special, final or check reads requested on a monthly basis stated as a percentage.
 - (ii) Statistical reporting summarizing the total number of correct special/final and AMR check reads captured as a percentage

of the total number of special/final/AMR check reads requested will be provided by CustomerWorks.

- (b) Completion
 - (i) This measure identifies the number of actual special, final and check reads completed on or before the required date as a percentage of special, final and check reads requested on a monthly basis stated as a percentage.
 - (ii) Statistical reporting summarising the total number of special, final and check reads completed as a percentage of total number of special, final and check reads requested will be provided by CustomerWorks.
- (c) Timeliness
 - (i) Special and check reads
 - A. This measure is calculated as the number of special and check read requests completed divided by the number of special and check reads requested within two business days of the date of request.
 - (ii) Final reads
 - A. This measure is calculated as the number of final reads completed divided by the number of final reads requested on the working date specified in the request or the immediately preceding working day if the date requested is a weekend or holiday. This measure assumes that the read request is made at least two working days prior to the required date.
 - B. Statistical reporting summarising the total number of special, final and check reads completed as a percentage of total number of special, final and check reads requested will be monitored by CustomerWorks.
- 3.3.3 Meter Order Processing
 - (a) Customer initiated orders will be sent to BC Gas immediately upon completion of the initiation process as specified in the Meter Services section of the Protocol.

- (b) Fieldwork closing will be processed within the timeframe supported by the automated interface. If an interface is not available fieldwork closing will be processed within two (2) business days of field completion.
- (c) Policies and procedures related to meter order processing are outlined in the Meter Services section of the Protocol.

3.4 Relation of Meter Services to Other Services

CustomerWorks shall use reasonable efforts to achieve a balance between Meter Reading Services with other BC Gas Operations Departments as follows:

- (a) maintenance of systems and processes supporting interfaces between CustomerWorks and BC Gas Operations as described in the Meter Reading section of the Protocol;
- (b) co-ordination of future initiatives to promote new technologies in the area of meter processing;
- (c) promotion of value added services that align with industry standards as a Meter Services provider; and
- (d) coordination with BC Gas of the provision of timely access to meters where a Customer key is required.

4. CUSTOMER ISSUE MANAGEMENT AND REPORTS

4.1 **Reports**

CustomerWorks shall provide to BC Gas, management and financial reports related to Meter Services in accordance with the Protocol.

4.2 Customer Issue Management

CustomerWorks and BC Gas shall work together to resolve Customer issues in a timely manner. All Customer issues and resolutions will be tracked and reported in accordance with the Protocol. Customer issues shall be resolved as follows:

(a) all issues raised by Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the Customer. Any issues requiring escalation to BC Gas for final resolution will be forwarded to a person appointed by the BC Gas Administrator within BC Gas as soon as reasonably possible;

- (b) all issues raised by Customers directly to BC Gas or the British Columbia Utilities Commission regarding services provided by CustomerWorks shall be forwarded to a single contact person as designated by the CustomerWorks Account Manager. Depending on the nature of the issue CustomerWorks will be asked to:
 - (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible; or
 - (ii) provide a draft response in writing to BC Gas;

All issues shall be resolved or responded to within five (5) Business Days of receipt from BC Gas or in a time frame agreed to with BC Gas or BC Gas Customer.

- (c) all correspondence sent directly to BC Gas Customers by CustomerWorks shall be under BC Gas letterhead; and
- (d) all issues and resolutions in items a) and b) shall be tracked and reported monthly to the BC Gas Administrator.

CustomerWorks and BC Gas shall work together to resolve Customer issues related to meter services in a timely manner and in accordance to the protocol.

5. PRICING

CustomerWorks shall provide the Services described in this Schedule for five years at the fixed fees ("Base Fees") shown in the following table:

	2002	2003	2004	2005	2006
	Base Fee				
Meter	\$4,804,187	\$5,063,309	\$5,063,309	\$5,063,309	\$5,063,309
Services					

The Base Fees will be adjusted monthly beginning in January 2003 to reflect changes to the number of Customers as defined in the Client Services Agreement.

6. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

6.1 The following table outlines the Performance Measures for all Meter Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet Performance Measures to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.2 of this Schedule.

6.2 The Performance Measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Notwithstanding the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Client Services Agreement.

Service	Performance	Deficiency	Cure Period	Penalty
	Measure	Period		
Accuracy	99%	1 month	1 month	
- Regular and				
Pick Up Reads				
Completion	98%	1 month	1 month	
- Regular and				
Pick Up Reads				
Timeliness	96%	1 month	1 month	
- Regular and				
Pick Up Reads				
Accuracy	99%	1 month	1 month	
- Special, Final				
and Check				
Reads				
Completion	98%	1 month	1 month	
- Special, Final				
and Check				
Reads				
Timeliness	96%	1 month	1 month	
- Special, Final				
and Check				
Reads				

"Cure Period" shall mean the time allotted to CustomerWorks to resolve or rectify the deficiency.

Specific penalties in this area are reflected in the Billing Support Services Schedule of the Client Services Agreement. Penalties will be charged based on billing services being accurate, timely and complete as identified in Schedule "B".

Table Of Contents

Clause

Page

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	3
4.	REPORTS	5
5.	CUSTOMER ISSUE MANAGEMENT	5
6.	PRICING	6
7.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES.	6

1. **DEFINITIONS**

Capitalized terms which are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

2. SCOPE OF SERVICES

2.1 CustomerWorks agrees to provide BC Gas with the following Credit and Collection Services in accordance with the policies and procedures outlined in Section 3 below and as specifically set out in the Protocol for all of BC Gas' accounts excluding the Customers specifically addressed in Schedule "E", Industrial and Off System Support Services. The scope of Services and level of performance documented in this Services Schedule is intended to be consistent with the level of Service BC Gas currently provides to its Customers.

Generally, Credit and Collection Services shall include:

(a) **Collection Management Service.**

The collection management Services component of the Credit and Collection will include:

- (i) producing and reviewing automated arrears summaries for current and finalized Customer accounts;
- (ii) performing outbound collection services for overdue accounts;
- (iii) responding to inbound Customer collection enquiries;
- (iv) negotiating and monitoring payment arrangements;
- (v) reporting collection performance, arrears status and bad debt statistics;
- (vi) skip tracing services;
- (vii) initiating fieldwork for service terminations for nonpayment through BC Gas' Distribution Operations;
- (viii) handling special payment arrangements such as bankruptcies and large dollar debit adjustments;
- (ix) managing external referrals and the relationship with external collection agents; and
- (x) managing of bad debts.

- (b) **Credit Approval Service.** The credit approval component of Credit and Collection Services include activities involved in providing a credit designation based on a review of the Customer's gas account history, for the purpose of determining whether a security deposit is required;
- (c) **Credit Monitoring.** The credit monitoring component of Credit and Collection Services include activities involved in periodically reviewing Customer's credit information, for the purpose of monitoring the Customer's credit standing;
- (d) **Security Deposit Administration.** The security deposit administration component of Credit and Collection Services include activities involved in administering a Customer security deposit program including calculating interest, issuing refunds, and issuing tax receipts in accordance with the Protocol; and
- (e) Administration of Other Security. CustomerWorks will administer the activities involved in obtaining letters of credit in lieu of security deposits for large volume Customers including annually reviewing Customer credit activity and arranging for the replacement of expiring letters as required.

2.2 CustomerWorks' Responsibilities

CustomerWorks will:

- (a) perform the Credit and Collection Services as defined herein in accordance with the Protocol; and
- (b) consult with BC Gas through BC Gas' Administrator or his designate on matters related to the Credit and Collection Services.

2.3 **Customer Contact**

CustomerWorks shall provide Credit and Collection Services in response to all Customer contact including:

- (a) telephone calls related to Credit and Collections , which will be handled by:
 - (i) integrated voice response ("IVR"); or
 - (ii) a Customer service representative;
- (b) e-mail and other electronic correspondence; and
- (c) written and faxed correspondence.

3. SERVICE GUIDELINES

3.1 Volume of Work

Activity forecasts for Credit and Collection Services activities will be specified in the Protocol.

3.2 Standards of Service:

CustomerWorks will:

- (a) manage the current and finalized overdue accounts to sustain optimal overdue and uncollectable balances for BC Gas' receivables in accordance with the service levels outlined in this Schedule and further described in the Protocol;
- (b) accurately calculate Customer credit ratings and administer security deposits and letters of credit on behalf of BC Gas;
- (c) manage collection agencies to achieve the success rate of collections in accordance with the Performance Measure defined in this Schedule and the Protocol;
- (d) arrange service terminations for non-payment and reconnections as required, in accordance with the Protocol; and
- (e) use commercially reasonable efforts to achieve an efficient exchange of information between Credit and Collection Services and outside service providers and to BC Gas Operations as set out in the Protocol.

3.3 BC Gas' Responsibilities

BC Gas will:

- (a) provide all necessary Data, sales and Customer forecasts, or other information to CustomerWorks in the format requested, on schedule or in a timely fashion to enable CustomerWorks to provide the Services; and
- (b) consult with CustomerWorks through CustomerWorks's Account Manager or his designate on matters related to the Services;
- (c) ensure the accuracy, legibility, completeness and timeliness of all information supplied to CustomerWorks at the commencement of the Client Services Agreement;

- (d) as reasonably required provide information in addition to that specified herein as CustomerWorks may occasionally require in performing the Credit and Collection Services; and
- (e) prepare annual bad debt write-off forecasts and analyses jointly with CustomerWorks.

3.4 Service Levels

- 3.4.1. CustomerWorks shall perform Credit and Collections Services as set out below and in accordance with the Protocol:
 - (a) maintain collections hours of operation as set out in the Protocol;
 - (b) respond to inbound inquiries such that:
 - (i) 65% of calls are answered in 30 seconds; and
 - (ii) written, fax or e-mail responses to Customer are made within four (4) Business Days;
 - (c) manage current accounts receivable such that the current aging percentages in each aging category measured at the end of each calendar month do not exceed

	% of revenue
Over 31 days	40%
Over 61 days	20%
Over 91 days	10%
Over 120 days	7%

The percentages set out above are preliminary and will be finalized at the end of the first year of the Term.

(d) manage finalized accounts receivable such that the aging percentages in each category measured at the end of each calendar month do not exceed

	% of revenue
Over 31 days	85%
Over 61 days	66%
Over 91 days	52%

Over 120 days 38%

The percentages set out above are preliminary and will be finalized at the end of the first year of the Term.

3.4.2. Planning and Budgeting

CustomerWorks shall be responsible for all planning and budgeting of its Credit and Collection Services provided pursuant to this Schedule.

4. **REPORTS**

CustomerWorks shall provide accurate management reports to BC Gas. All reports from the system shall be provided as specified in the Protocol.

5. CUSTOMER ISSUE MANAGEMENT

CustomerWorks and BC Gas shall work together to resolve Customer issues in a timely manner. All Customer issues and resolutions will be tracked and reported. Customer issues shall be resolved as follows:

- (a) all issues raised by Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the BC Gas Customer. Any issues requiring escalation to BC Gas for final resolution will be forwarded to a person appointed by the BC Gas Administrator as soon as reasonably possible; and
- (b) all issues raised by Customers directly to BC Gas regarding the Services provided by CustomerWorks shall be forwarded to a single contact point within CustomerWorks. Depending on the nature of the issue CustomerWorks will be asked to:
 - (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible; or
 - (ii) provide a draft response in writing to BC Gas as soon as reasonably possible.

All issues shall be resolved or responded to within five (5) Business Days of receipt from BC Gas or in a time frame agreed to with BC Gas or the BC Gas Customer. The issue and resolution will be reported back to the BC Gas Administrator.

(c) all correspondence sent directly to BC Gas Customers by CustomerWorks shall be under BC Gas letterhead; and (d) all issues and resolutions in items a) and b) shall be tracked and reported monthly to the BC Gas Administrator.

6. PRICING

CustomerWorks shall provide the Services described in this Schedule and the Protocol for five (5) years at the fixed fees ("Base Fees") shown in the following table:

	2002	2003	2004	2005	2006
	Base Fee				
Credit and Collection Services	\$1,710,110	\$2,045,062	\$2,045,062	\$2,045,062	\$2,045,062

The Base Fees will be adjusted monthly beginning in January 2003 to reflect changes to the number of Customers as defined in the Client Services Agreement.

7. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

- 7.1 The following table outlines the Service Performance Measures for all Credit and Collection Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet the Performance Measures to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.3 above.
- 7.2 The Performance Measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Notwithstanding the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Client Services Agreement.

Service	Performance Measure	Deficiency	Cure Period	Penalty
		Period		_
Inbound	65/30	1 month	1 month	\$25,000/
Collection				month
Inquiries				
Current	Current levels are	1 month	1 month	\$25,000/
Arrears Aging	reflected in Section			month
See note 1	3.4.1(c)			
below.				
Finalized	Current levels are	1 month	1 month	\$25,000/
Arrears Aging	reflected in Section			month
See note 1 3.4.1 (d)				
below				
Call Quality 95% based on current		2 consecutive	1 month	\$25,000/
	format	months		month

7.3 Credit and Collection Services

<u>Note 1</u>: The Performance Measures related to current arrears aging and finalized arrears aging will be monitored and defined at the end of the first year of the Term. Neither a Deficiency Period or Penalty will be applied to CustomerWorks in the first year of the Term.

"Cure Period" shall mean the time allotted to CustomerWorks to resolve or rectify the deficiency.

"Penalty" shall mean that amount charged to CustomerWorks at the time the deficiency is identified and shall apply for each month the deficiency occurs including the Cure Period. Failure to meet Performance Measures for more than 2 consecutive months will result in repetitive doubling of the monthly Penalty until the deficiency is resolved or rectified.

TABLE OF CONTENTS

CLAUSE

PAGE

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	5
4.	REPORTS	9
5.	CUSTOMER ISSUE MANAGEMENT	
6.	PRICING	
7.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND	
	PENALTIES	

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

1.1. "Industrial Services" shall mean the industrial Customer marketing department of BC Gas Utility Ltd.

2. SCOPE OF SERVICES

2.1. CustomerWorks agrees to provide BC Gas with the following Industrial and Off System Support Services for all BC Gas' large volume accounts in accordance with the policies and procedures outlined in the Protocol and as set out below. The scope of Services and level of performance documented in this Service Schedule is intended to be consistent with the level of Service BC Gas currently provides to its Customers.

Industrial and Off System Customers will include all large volume Customers including all transportation service, seasonal, off system and pipeline customers. Specific rate classes will include but are not limited to rates 4, 5, 6, 7, 10, 13, 14, 22, 23, 25, 27, 30 and 40 in addition to off system and pipeline contractual arrangements which are subject to negotiated terms and prices.

2.2. General

CustomerWorks will provide Industrial and Off System Support Services required by BC Gas related to:

- (a) account management and billing;
- (b) payment processing;
- (c) payment transfer to BC Gas;
- (d) inquiry handling;
- (e) Customer accounting and early stage collections in accordance with the Protocol;
- (f) information and interpretation of Data and processes in response to BC Gas staff inquiries; and
- (g) systems support.
2.3. Account Management and Billing Services

Account management includes the activities involved in establishing Customer information for the purposes of billing including entering contract information and entering and maintaining Customer contact information. Billing services will include importing usage from internal utility systems, calculating charges, applying applicable taxes and delivering statements to customers in a timely manner. CustomerWorks shall provide account management and billing Services for Industrial and Off System Customers including:

- (a) establishing and maintaining Customer, contract and Tariff Data in the CIS system;
- (b) accepting time-of-use volume and usage information from other systems and using the Data for billing;
- (c) managing Tariff rates and parameters and override prices for specific Customers as determined by the Customer contract;
- (d) applying negotiated prices either as specified in the tariff or as provided by Industrial Services at BC Gas;
- (e) calculating and applying the applicable taxes and franchise fees and maintaining Customer and premise tax exemption information;
- (f) applying appropriate special charges including application fees and calculating and applying late payment charges;
- (g) calculating and applying security deposit requests and refunds including accrued interest;
- (h) administering letters of credit including facilitating renewals;
- (i) applying charges for unmetered products and services including;
 - (i) a standing periodic charge
 - (ii) a one-time charge
 - (iii) other special charges as may be required;
- (j) calculating the balance due on billing and aging arrears balances;
- (k) producing and distributing Customer statements including:
 - (i) formatting, printing and delivering the bill. Delivery methods may include:
 - A. mail;
 - B. fax;
 - C. electronic presentment;

- (ii) selective insertion of up to five different brochures in each statement;
- (iii) selective printing of messages on the bill; and
- (iv) sending bills to Customers and paying any associated costs including but not limited to printing, postage, bill stock and envelopes; and
- (l) aggregating Customer consumption across meters and premises as required and consolidating invoices for Customers with multiple premises onto a single statement

2.4. Payment Processing and Payment Transfer to BC Gas

- 2.4.1 The payment processing services of the Industrial and Off System Support Services shall include the following:
 - (a) processing payments received on Customer accounts;
 - (b) processing returned payments and any associated charges;
 - (c) administering BC Gas' payment options including pre-authorized payment requests and withdrawals;
 - (d) administering pre-payment plan for credit risk Customers;
 - (e) facilitating the transfer of payment information for large industrial customers paying through wire transfer directly to BC Gas; and
 - (f) investigating payment problems, processing adjustments and verifying and processing refunds.
- 2.4.2 The payment transfer aspect of the Industrial and Off System Support Services shall include:
 - (a) daily electronic transfer of all payments received on behalf of BC Gas; and
 - (b) reports on payments transferred.

2.5. **Inquiry Handling**

The inquiry component of the Industrial and Off System Support Services shall include activities involved in responding to inquiries regarding BC Gas' Industrial and Off System Customer accounts as follows:

- (a) updating Customer and contract information in the CIS;
- (b) investigating and correcting billing, contract or payment errors;
- (c) initiating fieldwork;
- (d) explaining rate calculations and changes; and

(e) transferring calls as appropriate to the BC Gas marketing group responsible to managing the Customer relationship.

2.6. Customer Accounting and Collections

The Customer accounting aspect of the Industrial and Off System Support Services provided by CustomerWorks shall include the updating of accounting records related to Customer billing and payments. The collections component shall be performed in accordance with the Protocol. The Customer accounting and collections activities shall include:

- (a) billing for payment security;
- (b) managing Customer letters of credit;
- (c) monitoring and actioning overdue balances;
- (d) performing outbound collections including sending notices; and
- (e) initiating fieldwork disconnections and reconnections.

2.7. Information and Interpretation of Data and Processes in Response to BC Gas Staff Inquiries

CustomerWorks shall provide information and interpretation services to BC Gas staff which shall include but is not limited to:

- (a) Tariff application;
- (b) billing data and processes;
- (c) payment data and processes; and
- (d) credit and collections data and processes.

2.8. Systems Support

CustomerWorks shall provide support for the Customer Systems used to provide Industrial and Off System Support Services to BC Gas. This aspect of the Industrial and Off System Support Services shall include the following:

- (a) providing expert support on the Customer Systems related to Industrial and Off System Customers;
- (b) operating and maintaining the Customer Systems, including;
 - (i) Customer Systems administration activities required to support BC Gas' operational access to Customer information during normal business hours; and

- (ii) communication of or training related to Customer Systems or process changes or Customer Systems availability;
- (c) acting as the expert knowledge source in directing work to maintain, repair or enhance the Customer Systems used and work jointly with BC Gas on the integration of new applications, modifications or technology required by BC Gas;
- (d) managing system parameters, including specific contract overrides and predetermined charges received from an external source;
- (e) complying with and implementing changes required by regulatory agencies, including from time to time updating rate tables and implementing new billing requirements; and
- (f) supporting all reporting requirements necessary for CustomerWorks or BC Gas in the delivery of the Billing Support Services and providing BC Gas with ad hoc and special reports and Data extracts as required from BC Gas' Data in the Customer Systems.

3. SERVICE GUIDELINES

3.1. CustomerWorks' Responsibilities

CustomerWorks will:

- (a) perform the Industrial and Off System Support Services with sufficient and adequately trained staff in accordance with mutually agreeable policies and practices, all of which are set out in this Schedule and the Protocol;
- (b) consult with BC Gas through BC Gas' co-ordinator or the coordinator's designate on matters related to the Industrial and Off System Support Services;
- (c) ensure that adequate and appropriate systems and interfaces are available to meet the Performance Measures;
- (d) comply with BC Gas' requests for billing modifications due to regulatory agency directives;
- (e) answer billing, payment and collections inquiries with specialized representatives skilled and knowledgeable with respect to Industrial and Off System Customer accounts and in accordance with the Protocol;
- (f) provide appropriate and timely support through expert personnel and/or technology as required for special inquiries and Customer information extracts;

- (g) inform BC Gas in a timely manner of any problems that will affect the delivery of the Industrial and Off System Support Services;
- (h) notify BC Gas of any changes to CustomerWorks' procedures in the provision of Services and obtain BC Gas' agreement prior to such changes, where such changes will impact BC Gas' operations; and
- (i) consult with BC Gas prior to enacting any changes to the Service levels.

3.2. BC Gas' Responsibilities

BC Gas will:

- (a) provide all necessary Data, schedules, Activity Forecasts, special forms or other information to CustomerWorks in accordance with the Protocol;
- (b) consult with CustomerWorks through CustomerWorks' Account Manager or his designate on matters related to the Services;
- (c) permit CustomerWorks' employees and agents, as may be authorized by CustomerWorks, access to BC Gas' Data at such times and for such purposes as is necessary to allow CustomerWorks to perform its obligations under this Schedule;
- (d) provide information in addition to that specified herein as CustomerWorks may reasonably and occasionally require in performing the Industrial and Off System Support Services;
- (e) provide sufficient notice of regulatory and rate changes as outlined in the Protocol;
- (f) provide notice of content for new bill messages and specifications for new stuffers in accordance with the Protocol; and
- (g) will notify CustomerWorks of any changes to BC Gas' procedures which impact the provision of Services through the change control process outlined in Clause 15 of the Client Services Agreement prior to such changes, where such changes will impact CustomerWorks' operations.

3.3. Service Levels

CustomerWorks will:

- (a) perform the Industrial and Off System Support Services with sufficient and adequately trained staff sufficient to meet the service levels, all of which are set out in this Schedule and the Protocol;
- (b) accurately record and update all Customer, contract, premise and account information in the Customer Systems;

- (c) control the execution of batch processes, billing processes, interface files, message based services, and report jobs each business day as scheduled or required;
- (d) print and distribute reports to BC Gas each business day as scheduled or required;
- (e) calculate Customer account balances accurately;
- (f) deliver invoices to Customers each Business Day through the determined bill delivery mechanism as scheduled or required;
- (g) process all payments received before 12:00 pm PST within the same business day as the day of receipt;
- (h) process all refunds within four (4) Business Days of receipt of request by the Customer;
- (i) post all receivables, Tariff components and other transactions to the appropriate BC Gas accounting code accurately and in a timely fashion, and provide reconciliation assistance as required and as outlined in the Protocol;
- (j) ensure that the number of days from billing to delivery will be no more than two (2) Business Days;
- (k) provide staff coverage for all Industrial and Off System Support areas from at least 8 am to 4 pm PST for outgoing and incoming calls with Customers and authorized BC Gas staff. Any incoming calls after 4 pm PST will at minimum be recorded by voice mail and returned the next Business Day;
- respond to BC Gas' request for information on existing processes, Systems or Customer complaints within two (2) Business Days and for individual Customer data extracts within five (5) Business Days;
- (m) provide adequate expert resources in a timely fashion, to design and implement Customer System or process changes required by BC Gas due to regulatory or government direction, new Tariff or service requirements, or other business requirements, based on a schedule and budget agreed to by both parties;
- (n) respond to requests for structured data extracts related to groups of Customers within seven (7) Business Days;
- (o) respond to requests for Customer System modifications and other special requests within ten (10) Business Days with an assessment of the time and expected cost;
- (p) upon request by BC Gas selectively print bill messages or include with Customer bills up to five other inserts per Company each

billing work day by the date requested by BC Gas and in accordance with the Protocol;

- (q) maintain Service levels described herein;
- (r) manage the distribution of other billing or collections Customer correspondence related to Industrial and Off System Customers provided by CustomerWorks to the Customer;
- (s) follow the collection timeline established in the Protocol subject to acceleration for individual Customers at the direction of BC Gas; and
- (t) maintain an archival of billing and consumption information as required to support audit compliance with taxation authorities, regulatory requirements and a minimum of five years of consumption history to support Customer requests.

3.4. **Policies and Practices**

- 3.4.1 CustomerWorks shall deliver the Industrial and Off System Support Services in accordance with the Protocol.
- 3.4.2 BC Gas will:
 - (a) retain final approval rights for scripts, training materials and other materials for any Customer communications; and
 - (b) retain the right to monitor call and bill quality.

CustomerWorks will notify BC Gas of any changes to CustomerWorks' procedures in the provision of Services and obtain BC Gas' agreement prior to such changes, where such changes will impact BC Gas' operations.

3.5. **Performance Measures**

CustomerWorks shall provide the Industrial and Off System Support Services in accordance with the Service levels described herein which at a minimum shall meet BC Gas' Service levels for the same or similar Industrial and Off System Support Services provided by BC Gas prior to the completion of the transition of the Industrial and Off System Support Services to CustomerWorks.

Section 3.3 sets out the Service level measures for the Industrial and Off System Support Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet Industrial and Off System Support Service levels to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.2. Where there are Industrial and Off System Support Services performed currently, but no existing Performance Measures are recorded it is agreed that as soon as standards can be measured (with consideration given to industry standards) and validated by the Client Services Committee, they will be incorporated into this Schedule.

The service levels and measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Subject to the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Schedule.

3.6. **Planning and Budgeting**

CustomerWorks shall be responsible for all planning and budgeting of its Billing Support Services provided pursuant to this Schedule.

3.7. Industrial and Off System Support Services Infrastructure and Support

CustomerWorks shall provide any and all Industrial and Off System Support Services infrastructure and support in order to provide Industrial and Off System Support Services to BC Gas. All infrastructure and support costs, including maintenance costs, are to be provided at CustomerWorks' expense. Such infrastructure and support shall include:

(a) **Software and Hardware**

CustomerWorks shall provide all software and hardware required for its day to day operation in its provision of the Industrial and Off System Support Services.

(b) **Buildings and Equipment**

CustomerWorks shall provide all space and equipment including transportation requirements required for its day to day operations in its provisions of the Industrial and Off System Support Services.

(c) Approval Process for Changes Affecting Customers

Changes to Industrial and Off System Support Services shall be made in accordance with the scope change process in the Client Services Agreement.

4. **REPORTS**

CustomerWorks shall provide to BC Gas, management and financial reports related to Billing Support Services in accordance with the Protocol.

5. CUSTOMER ISSUE MANAGEMENT

CustomerWorks and BC Gas shall work together to resolve Customer issues in a timely manner. All Customer issues and resolutions will be tracked and reported in accordance with the Protocol. Customer issues shall be resolved as follows:

- (a) all issues raised by Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the Customer. Any issues requiring escalation to BC Gas for final resolution will be forwarded to a person appointed by the BC Gas Administrator within BC Gas as as soon as reasonably possible;
- (b) all issues raised by Customers directly to BC Gas or the British Columbia Utilities Commission regarding services provided by CustomerWorks shall be forwarded to a single contact person as designated by the CustomerWorks Account Manager. Depending on the nature of the issue CustomerWorks will be asked to:
 - (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible; or
 - (ii) provide a draft response in writing to BC Gas.

All issues shall be resolved or responded to within five (5) Business Days of receipt from BC Gas or in a time frame agreed to with BC Gas or BC Gas Customer.

- (c) all correspondence sent directly to BC Gas Customers by CustomerWorks shall be under BC Gas letterhead; and
- (d) all issues and resolutions in items (a) and (b) shall be tracked and reported monthly to BC Gas.

6. PRICING

6.1. CustomerWorks will provide the Services described in this Schedule for five (5) years at the fixed fees ("Base Fees") set out in the following table:

	2002	2003	2004	2005	2006
	Base Fee				
Industrial	\$354,968	\$404,667	\$404,667	\$404,667	\$404,667
and Off					
System					
Support					

The Base Fees will be adjusted to reflect changes to the number of Customers as defined in the Client Services Agreement. Additionally:

- (a) Base Fees will include 300 hours per year for ad hoc and special reports and Data extracts specifically related to supporting Industrial and Off System Customer requests;
- (b) Customer Systems work done as a result of requests from BC Gas for a scope change, excluding changes to existing rate schedule prices and to system tables, and for ad hoc and special reports and Data extracts in excess of 300 hours per year will be charged based on the fees contained in the Professional Services Schedule attached hereto as Appendix "E1"; and
- (c) incremental costs incurred by CustomerWorks due to material errors made by CustomerWorks which are not recovered in the fees outlined herein will not be billed to BC Gas. Incremental costs incurred by CustomerWorks due to material errors made by BC Gas will be billed based on the fees set out in Appendix "E1" attached hereto. Such incremental charges are subject to prior mutual agreement as determined by the Client Committee.
- 6.2. All Base Fees will be billed monthly.

7. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

- 7.1. The following table outlines the Performance Measures for all Industrial and Off System Support Services. CustomerWorks shall not be responsible for, nor shall BC Gas be entitled to any remedies for failure to meet Performance Measures to the extent that such failure was caused by the failure of BC Gas to meet the requirements of Section 3.2.
- 7.2. The Performance Measures shall be reviewed from time to time and may be revised upon mutual agreement of both parties. Notwithstanding the above, Performance Measures will be reviewed annually and may be revised upon mutual agreement of both parties on the anniversary date of the Client Services Agreement.
- 7.3. CustomerWorks will provide BC Gas with a summary of CustomerWorks' performance of the measures in Section 7 within ten (10) Business Days of the month-end.

7.4. Key Contacts

CustomerWorks

For questions regarding billing issues, the Manager of Billing Services, or as otherwise identified in the Protocol, will be the key contact.

For questions regarding system outages or other system problems, and the status of special projects including rate changes, the key contact will be the Manager of Billing Services or a designate or as described in the Protocol.

For problems with delivery on performance measures or Industrial and Off System Support Services not meeting client expectations, the CustomerWorks Account Manager will provide the key contact. The CustomerWorks Account Manager will undertake to resolve the problems as expeditiously as possible.

For new services, special requests, or changes to existing Industrial Off System Support Services the CustomerWorks Account Manager or as otherwise designated in the Protocol will be the key contact.

BC Gas

For questions regarding Industrial and Off System Support Services the key contact will be the Administrator or as described in the Protocol.

7.5. Performance deficiencies will be brought to the attention of CustomerWorks and appropriate measures will be implemented to correct the performance issues. The following chart outlines the Deficiency Period, Cure Period and Penalty for non-performance for the key Industrial and Off System Support Services measures:

Industrial and Off System Support Services

Service	Performance Measure	Deficiency	Cure	Penalty
		Period	Period	
Accuracy	99.5% of bills accurate based	1 month	1 month	\$10,000/ month
	upon input data.			
Timeliness	95.0% of bills delivered by	1 month	1 month	\$10,000/ month
	the method specified within			
	two (2) Business Days of the			
	date the billing file is			

	created.			
Completion	95.0% of bills generated	1 month	1 month	\$10,000/ month
	within two (2) Business Days			
	of the receipt of all necessary			
	billing information.			
Collections	Provide to BC Gas a monthly	1 month	1 month	\$5,000/month
	summary of Customers in			
	arrears two (2) Business			
	Days after all billing is			
	completed for the month.			
Collections	Customers with an arrears	1 month	1 month	\$5,000/month
	balance greater than \$1000			
	will be contacted by			
	CustomerWorks regarding			
	their overdue balance within			
	21 days of the due date.			
Collections	Monthly collection status	1 month	1 month	\$2,500/month
	meetings will be held within			
	five (5) Business Days of the			
	monthly summary of			
	customers in arrears being			
	provided to BC Gas unless			
	the meeting is delayed by BC			
	Gas request.			

"Penalty" shall mean that amount charged to CustomerWorks at the time the deficiency is identified and shall apply each month the deficiency occurs including the cure period. Failure to meet the Performance Measures for more than two (2) consecutive months will result in repetitive doubling of the monthly penalty until the deficiency is resolved or rectified. Hourly charge out rates for system personnel performing Scope Change work or work over 600 hours per year on ad hoc and special reports and Data extracts for BC Gas shall be as follows:

Senior Project Manager	\$150
Senior Consultant	\$100
Intermediate Consultant	\$85
Junior Consultant	\$70

TABLE OF CONTENTS

CLAUSE

PAGE

i

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	2
4.	REPORTS	4
5.	PRICING	4
6.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND	
	PENALTIES	5
7.	TERMINATION OF SCHEDULE "F"	5

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

- 1.1. "Commercial Unbundling Program" shall mean a British Columbia Utilities Commission ("BCUC") approved initiative which provides large and small commercial Customers with an opportunity to purchase their gas commodity from a supplier other than Terasen.
- 1.2. "Marketers" shall mean a party licensed by the BCUC to contract with end use Customers to provide gas commodity.

2. SCOPE OF SERVICES

- 2.1. CustomerWorks agrees to provide Terasen with the following services for all Terasen's large and small commercial Customers in accordance with the policies and procedures outlined in the Protocol and as set out below for the Commercial Unbundling Program.
- 2.2. Generally, CustomerWorks will provide Commercial Unbundling Operational Services (the "Services") as follows:
 - (a) Customer inquiry services related to billing and enrollment including calls related to the midstream gas components, Marketer names and phone numbers as well as participant status;
 - (b) Customer inquiry services resulting from Terasen's Customer education campaign;
 - (c) data capture and data transfer services related to Customer enrollments, rate changes, enrollment rejections, exception handling and rejection processing;
 - (d) financial reporting support identifying charges directly related to the new marketer tariffs;
 - (e) adjustment processing for retroactive rate changes resulting from Customer disputes;
 - (f) compilation and distribution of Customer consumption history at a premise based on authorized requests from Marketers; and

(g) Tariff set-up and maintenance related to the new marketer tariffs and Terasen midstream components.

3. SERVICE GUIDELINES

3.1. CustomerWorks' Responsibilities

CustomerWorks will:

- (a) perform the Services with sufficient and adequately trained staff in accordance with mutually agreeable policies and practices and sufficient to meet the service levels, all of which are set out in this Schedule and the Protocol;
- (b) consult with Terasen through Terasen's coordinator or the coordinator's designate on matters related to the Services;
- (c) ensure that adequate and appropriate systems, Customer contact technology and equipment are available to meet the service levels; and
- (d) provide reasonable access to Terasen for monitoring purposes on request.

3.2. Terasen' Responsibilities

Terasen will:

- (a) be responsible for pre-validating transaction files and will own the relationship with Marketers and be responsible for all Marketer related communications with CustomerWorks;
- (b) provide timely notification of changes to the requirements for Commercial Unbundling or the parameters used to determine pricing; and
- (c) provide timely information and decisions on the Commercial Unbundling Program and related business process issues.

3.3. **Program Assumptions**

- (a) Only existing large and small commercial Customers on Rates 2, 3, and 23, within the Lower Mainland, Inland and Columbia divisions, are eligible to participate in the Commercial Unbundling Program, excluding propane customers in Revelstoke;
- (b) The initial Commercial Unbundling Program customer billing start date will be November 1, 2004. Subsequently, the Commercial Unbundling Program will support quarterly entry dates beginning in May 2005;
- (c) Marketers will be required to maintain a 24/7 telephone service to support Customer inquiries related to Marketer provided rates and contract terms as well as advising of appropriate emergency contact procedures;
- (d) Marketers will be limited to one rate change annually per pricing option; and
- (e) CustomerWorks will not handle disputes between Customers and Marketers.
- 3.4. Service Levels
 - (a) Terasen will receive monthly reporting of complaints directly related to the Commercial Unbundling Program;
 - (b) CustomerWorks will report monthly financial information by Tariff class in accordance with the timelines as established by Terasen and as set out in the Protocol;
 - (c) Enrolment transactions and rejection responses will be processed each business day;
 - (d) Customer correspondence related to the Commercial Unbundling Program will be responded to within four (4) Business Days of receipt;
 - (e) Exceptions will be processed within three (3) Business Days; and
 - (f) Authorized Marketer requests for consumption history will be processed within five (5) Business Days of receipt.

3.5. **Policies and Practices**

- 3.5.1 CustomerWorks shall deliver the Commercial Unbundling Operational Services in accordance with the Protocol.
- 3.5.2 Terasen will:
 - (a) retain final approval rights for scripts, training materials and other materials for any Customer communications including approval of delivery method or channel;
 - (b) retain the right to monitor call quality.

4. **REPORTS**

CustomerWorks shall provide all management reports to Terasen in accordance with the Protocol which may be amended, from time to time.

5. PRICING

5.1. CustomerWorks will provide the Services described in this Schedule for three (3) years at the fees set out in the following table:

	2004	2005	2006
Commercial Unbundling	\$ 77,329	\$ 121,632	\$ 121,632
Operational Services -			
Base Fees			
Enrolment Exception	\$ 23.70	\$ 23.70	\$ 23.70
Transaction – per			
occurrence			
Marketer Group Set-up	\$1,776	\$1,776	\$1,776
Request - per group			
Marketer Rate Change	\$ 91	\$ 91	\$ 91
Request – per rate change			
per group			
Request for Customer	\$ 30	\$ 30	\$ 30
consumption information			
– per request			

Note: Base fees will be billed monthly. Transactional fees will be billed monthly as incurred.

The base and variable fees are based on the following assumptions related to market participation and the program assumptions described in Section 3.3 of this Schedule.

- a) Two Marketers are expected to participate in the first year of the program,* each offering two pricing options. In the next two years participation is expected to increase to four additional Marketers each offering four pricing options; and
- b) The number of enrolment requests is expected to be 10,000 requests per yearwith an exception handling rate of 15% in the first year and decreasing to 10% in the two following years.

6. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

The performance Measures, Deficiency Cure Periods and Penalties set out in Schedule "A" and Schedule "B" shall apply.

Note: For the first ninety (90) days after the midstream charges are shown separately on commercial bills, any billing accuracy errors that are directly attributable to the calculation or presentment of these charges will be exempt from the calculation of billing accuracy for penalty determination purposes. In addition, for the first ninety (90) days after the start of billing Marketer tariffs in November 2004, any billing accuracy errors that are directly attributable to the calculation or presentment of these charges will be exempt from the calculation of billing accuracy for penalty determination purposes.

7. TERMINATION OF SCHEDULE "F"

Notwithstanding Clause 3.4 of the Client Services Agreement, the parties agree that Terasen may terminate this Schedule upon thirty (30) days written notice with no penalties or damages. All costs, reasonably and directly incurred by CustomerWorks or its subcontractors related to the Commercial Unbundling Operational Services, shall be paid by Terasen.

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TABLE OF CONTENTS

CLAUSE

PAGE

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	2
4.	REPORTS	4
5.	PRICING	4
6.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND	
	PENALTIES	5
7.	TERMINATION OF SCHEDULE "G"	5

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

- 1.1. "Stable Rate" or "Stable Commodity Rate" shall mean a gas commodity rate established as a fixed annual rate and offered by Terasen as an alternative to the standard rate.
- 1.2. "Stable Rate Program" shall mean a British Columbia Utilities Commission ("BCUC") approved initiative which provides residential Customers with an opportunity to select a gas commodity purchase alternative that guarantees the price of the commodity for a one year term.

2. SCOPE OF SERVICES

- 2.1. CustomerWorks agrees to provide Terasen with the following services for all Terasen's residential Customers in accordance with the policies and procedures outlined in the Protocol and as set out below for the Stable Rate Program.
- 2.2. Generally, CustomerWorks will provide Stable Rate Operational Services ("Services") as follows:
 - (a) Customer inquiry services resulting from Terasen's Customer education campaign;
 - (b) Customer inquiry services related to program enrolment, rejections, participation requirements and billing of the new Stable Rate tariff ;
 - (c) data capture services related to processing Customer enrollment requests, rejection processing, rate change processing and exception handling;
 - (d) confirmation services to provide Customers with written notice of their acceptance or rejection status at the time of enrolment;
 - (e) data update services related to the reversion of Customers to the standard offering in response to Customer requests;
 - (f) reporting of Stable Rate metrics related to Customer participation;

- (g) financial reporting support identifying charges directly related to the stable rate Tariff; and
- (h) Tariff set-up and maintenance related to the new Stable Rate option.

3. SERVICE GUIDELINES

3.1. CustomerWorks' Responsibilities

CustomerWorks will:

- (a) perform the Services with sufficient and adequately trained staff in accordance with mutually agreeable policies and practices and sufficient to meet the service levels, all of which are set out in this Schedule and the Protocol;
- (b) consult with Terasen through Terasen's coordinator or the coordinator's designate on matters related to the Services;
- (c) ensure that adequate and appropriate systems, Customer contact technology and equipment are available to meet the Service levels; and
- (d) provide reasonable access to Terasen for monitoring purposes on request.

3.2. Terasen's Responsibilities

Terasen will provide:

- (a) timely notification of changes to the requirements for the Stable Rate Program or the parameters used to determine pricing; and
- (b) timely information and decisions on the Stable Rate Program and related business process issues.

3.3. **Program Assumptions**

- (a) Only existing Terasen Gas residential Customers on Rate 1, within the Lower Mainland, Inland and Columbia divisions, are eligible to participate in the Stable Rate Program, excluding propane customers in Revelstoke.
- (b) There will be only one Stable Rate alternative available within each Terasen operating division.
- (c) The Stable Rate Option Program customer billing start date will be January 1, 2005 and will run for one year. A one year optional extension is anticipated.
- (d) The stable rate Tariff will remain unchanged during the term of the Stable Rate Option Program.

3.4. Service Levels

- (a) Customer enrollments and confirmation / rejection letters will be processed within five (5) Business Days of receipt unless exceptions occur, in which case the transaction will be processed within (6) Business Days.
- (b) Cancellation requests in response to confirmation letters will be processed within five (5) Business Days of being advised by customers.
- (c) Customer correspondence related to the Stable Rate Program will be responded to within four (4) Business Days of receipt;
- (d) All enrollment / rejection transactions will be captured in the customer information system for tracking and audit purposes.
- (e) CustomerWorks will report monthly financial information by Tariff class within the timelines as established by Terasen and as set out in the Protocol.
- (f) All Customer requested removals from the Stable Rate Option will be processed within five (5) Business Days of receipt.

3.5. **Policies and Practices**

- (a) Customer issue management shall be dealt with in accordance with Schedule "A".
- (b) CustomerWorks shall deliver the Stable Rate Program Operational Services in accordance with the Protocol.
- (c) Terasen will:
 - (i) retain final approval rights for scripts, training materials and other materials for any Customer communications including approval of delivery method or channel; and
 - (ii) retain the right to monitor call quality.

4. **REPORTS**

CustomerWorks shall provide all management reports to Terasen in accordance with the Protocol which may be amended, from time to time.

5. PRICING

5.1. CustomerWorks will provide the services described in the Schedule for three (3) years at the fees set out in the following table:

	2004	2005	2006
2005 Stable Rate Program – Base	\$ 36,600	\$ 73,200	
Fees			
Stable Rate Enrolment	\$ 26.00	\$ 26.00	
Transaction – per occurrence			
Optional 2006 Stable Rate Program		\$ 50,580	\$ 101,160
– Base Fee			
Stable Rate Enrolment		\$ 30.00	\$ 30.00
Transaction – per occurrence			

Note: Base Fees will be billed monthly. Transactional fees will be billed monthly as incurred.

The Base Fees and variable fees are based on the following assumptions related to market participation and the program assumptions described in Section 3.3 of this Schedule.

a) The Base Fees and variable fees are based on the assumption that participation will not exceed 20,000 enrollments in each of the two years of the Stable Rate Program.

6. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

The performance measures, deficiency cure periods and penalties shall be in accordance with those set out in Schedules "A" and "B".

7. TERMINATION OF SCHEDULE "G"

Notwithstanding Clause 3.4 of the Client Services Agreement, the parties agree that Terasen may terminate this Schedule upon thirty (30) days written notice with no penalties or damages. All costs, reasonably and directly incurred by CustomerWorks <u>or its subcontractors</u> related to the Stable Rate Program Operational Services, shall be paid by Terasen.

TABLE OF CONTENTS

CLAUSE

PAGE

1.	DEFINITIONS	.1
2.	SCOPE OF SERVICES	.1
3.	SERVICE GUIDELINES	. 2
4.	TERASEN RESPONSIBILITIES	. 2
5.	CUSTOMER ISSUE MANAGEMENT	. 2
6.	PRICING	. 3
7.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES	3

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

For the purposes of this Schedule:

"**TGVI Customer**" shall mean customers of Terasen Gas (Vancouver Island) Inc. and Terasen Gas (Whistler) Inc.

"**Services**" shall mean the Client Services set out in Schedules "A" through Schedule "D" attached to the Client Services Agreement.

2. SCOPE OF SERVICES

- 2.1. CustomerWorks agrees to provide Terasen with the Services for all Terasen Gas (Vancouver Island) Inc. and Terasen Gas (Whistler) Inc. Customers in accordance with the policies and procedures outlined in the Protocol and as set out below. The Scope of Services and level of performance applicable to Customers of Terasen will apply to TGVI Customers, and for the purposes of determining actual service levels achieved by CustomerWorks, Customers will include TGVI Customers, subject to Section 3 of this Schedule "H".
- 2.2. CustomerWorks will provide the Services in accordance with the Service Guidelines specifically set out in each of Schedule "A" through Schedule "D" attached to the Client Services Agreement.
- 2.3. The effective date of this Schedule will coincide with the Banner to Energy Data Conversion completion date set out in the agreement between Terasen Gas (Vancouver Island) Inc. and Accenture Business Services For Utilities Inc. dated April 14, 2005.

2.4. Meter Reading

Terasen agrees that TGVI Customer meters shall be read bi-monthly based on the same inclusion criteria for reads in a non-read month as currently applicable to Terasen under Schedule "C". The majority of meters shall be read jointly with the Hydro meters, which will require reconfiguration of most TGVI Customers' meter reading cycles.

2.5. Emergency Call Handling

The Services in Schedule "A" shall replace the current proposal between Terasen and Accenture Business Services For Utilities Inc. dated June 3, 2004 for the provision of after hours emergency call handling for TGVI Customers, which after hours emergency call handling services Accenture Business Services For Utilities Inc. is currently carrying out.

3. SERVICE GUIDELINES

Service Levels

CustomerWorks will provide Terasen all the Services at the service levels set out specifically in Schedule "A" through Schedule "D", as appropriate. The addition of the TGVI customers will be accounted for in the overall Service Level metrics from the effective date of this service schedule with the exception of billing accuracy which will included in the determination after 60 days from the effective date of this schedule. [

4. TERASEN RESPONSIBILITIES

Terasen will obtain the software licenses required to add TGVI Customers to the Peace Energy System.

5. CUSTOMER ISSUE MANAGEMENT

CustomerWorks and Terasen shall work together to resolve any TGVI Customer issues in a timely manner. All TGVI Customer issues and resolutions will be tracked and reported in accordance with the Protocol. TGVI Customer issues shall be resolved as follows:

- (a) all issues raised by TGVI Customers directly to the attention of CustomerWorks shall be resolved within five (5) Business Days or in a time frame agreed to with the TGVI Customer. Any issues requiring escalation to Terasen for final resolution will be forwarded to a person appointed by the Terasen Administrator within Terasen as soon as reasonably possible;
- (b) all issues raised by TGVI Customers directly to Terasen or the British Columbia Utilities Commission regarding Services provided by CustomerWorks shall be forwarded to a single contact person as designated by the CustomerWorks Account Manager. Depending on the nature of the issue CustomerWorks will be asked to:

- (i) respond directly to the complainant, either verbally or in writing as soon as reasonably possible, or
- (ii) provide a draft response in writing to Terasen;

All issues shall be resolved or responded to within five (5) Business Days of receipt from Terasen or in a time frame agreed to with Terasen or TGVI Customer.

- (c) all correspondence sent directly to TGVI Customers by CustomerWorks shall be on Terasen letterhead; and
- (d) all issues and resolutions in items a) and b) shall be tracked and reported monthly to the Terasen Administrator.

6. PRICING

- 6.1. CustomerWorks will provide the Services for the balance of the Term remaining in the Client Services Agreement at fixed fees (the "Schedule "H" Base Fees") of \$34.94 per TGVI Customer per year. Schedule "H" Base Fees shall be payable to CustomerWorks on a pro rata basis per TGVI Customer for any period that is less than one year.
- 6.2. Commencing January 1, 2006, the Schedule "H" Base Fees will be adjusted by 50% of the CPI rate experienced in the prior year.
- 6.3. The Schedule "H" Base Fees do not include costs related to bill print, collection notices and postage. Terasen will pay CustomerWorks actual costs of bill print, collection notices and postage. The current estimated annual cost for bill print, collection notices and postage is \$6.952 per TGVI Customer.

7. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

The Performance Measures Deficiency Cure Periods and Penalties set out in Schedule "A" through Schedule "D", as applicable, shall apply to the Services set out in this Schedule.

TABLE OF CONTENTS

CLAUSE

PAGE

1.	DEFINITIONS	1
2.	SCOPE OF SERVICES	1
3.	SERVICE GUIDELINES	2
4.	REPORTS	4
5.	PRICING	4
6.	PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND	
	PENALTIES	5
7.	TERMINATION OF SCHEDULE "I"	6

1. **DEFINITIONS**

Capitalized terms that are contained in this Schedule and are not defined herein shall have the respective meanings set out in Clause 1 of the Client Services Agreement.

- 1.1. "Customer Choice Program" shall mean a British Columbia Utilities Commission ("BCUC") approved initiative which provides residential and commercial Customers with an opportunity to purchase their gas commodity from a supplier other than Terasen.
- 1.2. "Marketers" shall mean a party licensed by the BCUC to contract with end use Customers to provide gas commodity.
- 1.3 "Exceptions" shall mean billing adjustments due to retroactive drops or enrolments, changes to consolidated billing set-ups, transfer of customers from transportation to marketer rates and exception handling related to Customer Choice commercial and residential accounts.

2. SCOPE OF SERVICES

- 2.1. CustomerWorks agrees to provide Terasen with the following services for Terasen's residential and commercial Customers in accordance with the policies and procedures outlined in the Protocol and as set out below for the Customer Choice Program.
- 2.2. CustomerWorks will provide Customer Choice Operational Services (the "Services") as follows:
 - (a) Customer inquiry services for:
 - billing and enrollment calls and correspondence, as well as those inquires related to the midstream gas components, Marketer complaints and disputes, Marketer names and phone numbers as well as participant status;
 - (ii) Terasen's customer education campaign;
 - (iii) Customer confirmation letters and contract renewal;
 - (b) processing of contract confirmation letters for all residential participants;

- (c) data capture and data transfer services related to Customer enrollments, rate changes, enrollment rejections, exception handling, disputes and rejection processing;
- (d) identifying charges directly related to the new marketer tariffs for financial reporting;
- (e) adjustment processing for retroactive rate changes resulting from resolved Customer disputes;
- (f) reversion of Customers to the applicable Terasen rate at the termination of the contract or upon receipt of a drop request from their marketer;
- (g) Tariff set-up and tariff changes related to the new marketer tariffs and Terasen midstream components; and
- (h) System support and sustainment for the Customer Choice Program infrastructure.

3. SERVICE GUIDELINES

3.1. CustomerWorks' Responsibilities

CustomerWorks will:

- (a) perform the Services with sufficient and adequately trained staff sufficient to meet the service levels, all of which are set out in the Client Services Agreement and this Schedule;
- (b) consult with Terasen through Terasen's Administrator or the Administrator's designate on matters related to the Services;
- (c) ensure that adequate systems, Customer contact technology and equipment are available to meet the service levels; and
- (d) provide reasonable access to Terasen for monitoring purposes on request.

3.2. Terasen' Responsibilities

Terasen will:

(a) be responsible for pre-validating transaction files and will own the relationship with Marketers and be responsible for all Marketer related communications with CustomerWorks;

- (b) provide timely notification to CustomerWorks of changes to the requirements for Customer Choice or the parameters used to determine pricing in accordance with the Scope Change provisions in the Client Services Agreement; and
- (c) provide timely information and decisions on the Customer Choice Program and related business process issues.

3.3. **Program Assumptions**

- (a) All residential and commercial customers within the Lower Mainland, Inland and Columbia divisions, are eligible to participate in the Customer Choice Program, excluding propane customers in Revelstoke;
- (b) The Customer Choice start date for commercial customers will be April 1, 2007. Marketers will be able to enroll new customers quarterly until November 1, 2007 after which marketers will be able to enroll customers monthly at the beginning of the month.
- (c) The Customer Choice start date for residential customers will be November 1, 2007. At that time marketers will be able to enroll customers monthly at the beginning of the month.
- (d) Marketers will be required to maintain a 24/7 telephone service to support Customer inquiries related to Marketer provided rates and contract terms as well as advising of appropriate emergency contact procedures;
- (e) Marketers will be limited to one rate change annually per pricing option; and
- (f) CustomerWorks will not arbitrate disputes between Customers and Marketers. CustomerWorks will forward formal disputes to the British Columbia Utilities Commission for resolution.
- (g) Daily enrolment transactions will be received throughout the day.

3.4. Service Levels

- (a) Terasen will receive monthly reporting of complaints directly related to the Customer Choice Program;
- (b) Monthly, CustomerWorks will report financial information by Tariff class in accordance with the timelines as established by Terasen and as set out in the Protocol;

- (c) Enrolment transactions and rejection responses will be processed each Business Day;
- (d) Confirmation letters will be mailed to customer within one business day of receipt by CustomerWorks of a valid enrolment: such enrolment must be received 5:00 pm each Business Day;
- (e) All other Customer correspondence related to the Customer Choice Program will be responded to within two (2) Business Days of receipt; and
- (f) Exceptions will be processed within three (3) Business Days of receipt or identification.

3.5. **Policies and Practices**

- 3.5.1 Terasen will:
 - (a) retain final approval rights for scripts, training materials and other materials for any Customer communications including approval of delivery method or channel;
 - (b) retain the right to monitor call quality.

4. **REPORTS**

CustomerWorks shall provide all management reports to Terasen in accordance with the Protocol which may be amended, from time to time.

5. PRICING

5.1. CustomerWorks will provide the Services described in this Schedule throughout the current and any subsequent term of the Client Services Agreement.

	Charge
Customer Choice Inquiries	\$1.30 / Minute
Billing Adjustment - Retroactive	\$ 10.00 per retroactive
drop/Enrolment	drop/enrolment premise
Marketer Group Set-up Request **	Per hour at hourly charge out rates
	for system personnel according to
	Client Services Agreement
Rate Changes to Marketer Group **	Per hour at hourly charge out rates
	for system personnel according to
	Client Services Agreement

Enrolment confirmation letter	Flow –through price as provided by
	a third party provider, estimated at
	\$.616 per transaction
Enrolment Confirmation Cycle charge	Flow-through price as provided by a
	third party provider of \$35 per cycle
	assuming files will be processed
	daily
IT Sustainment Fee	\$ 6432.00 per month
Customer Choice Surcharge *	\$60.00 per hour

Note: Sustainment fees will be billed monthly. Transactional fees and surcharge fees will be billed monthly as incurred.

* The Customer Choice surcharge will be based on itemized timesheets and will include the specific services listed below:

- a) consolidated billing set-up;
- b) transfer from transportation rate to marketer rate; and
- c) exception handling related to Customer Choice commercial and residential accounts.

** The hourly pricing for marketer group set-up requests and rate changes to marketer groups will be in affect only until the implementation of Energy 8.0. Within 60 days of implementation, the pricing for these services will be renegotiated to reflect changes to the tariff set-up structure implemented through the Energy 8.0 version upgrade. In the event that the parties are unable to agree to a price change, either of the parties may submit the pricing to the internal dispute resolution process as set out in Clause 16 of the Client Services Agreement. Notwithstanding any pricing change, invoicing for marketer group set-up requests and rate changes to marketer groups will be based on itemized timesheets.

The pricing in the table above shall be revised annually in accordance with the pricing provisions in the Client Services Agreement.

6. PERFORMANCE MEASURES, DEFICIENCY CURE PERIODS AND PENALTIES

The performance Measures, Deficiency Cure Periods and Penalties set out in Schedule "A" and Schedule "B" shall apply. Additional performance Measures, Deficiency cure periods and penalties specifically rated to the Customer Choice program are outlined below.

Service	Performance Measure	Deficiency Period	Penalty
Timeliness -	99% of Confirmation	Monthly	\$5,000
Confirmation	letters for new valid	-	per
Letters	enrolments will be		month
	mailed to customers		
	within two (2) Business		
	Days following receipt		
	and confirmation of the		
	enrolment request: such		
	requests must be received		
	by 5:00 pm daily		
Timeliness –	95% of valid enrolments	Monthly	\$5,000
Enrolment	will be processed in CIS		per
Processing	within 24 hours of receipt		month
Timeliness –	98% of new marketer	Monthly	\$5,000
New group set-	groups will be entered in		per
up	CIS within three (3)		month
	Business Days of the		
	request being received		

7. TERMINATION OF SCHEDULE "I"

Notwithstanding Clause 3.4 of the Client Services Agreement, the parties agree that Terasen may terminate this Schedule upon six (6) months written notice. All costs, reasonably and directly incurred by CustomerWorks or its subcontractors related to the Customer Choice Operational Services, shall be paid by Terasen.
Appendix M TAYLOR REACH – TOWARD A MULTI-CHANNEL CONTACT CENTRE

Special Report

Toward a Multi-Channel Contact Centre

Email and Chat: Emerging Contact Centre Technologies



Prepared by: The Taylor Reach Group, Inc.

August 2009

Table of Contents

11
11
16
17
18
21
•

Special Report Toward a Multi-Channel Contact Centre

Email and Chat: Emerging Contact Centre Technologies

1. Executive Summary

Since Rockwell introduced the first ACD in 1973 the call and contact centre industry has been an on-going 'arms race' of technologies: CTI, Predictive Dialers, Interactive Voice Response (IVR) systems, call monitoring, call recording, call quality, workforce management, email management, chat management, and the list goes on.

This Report addresses two of the fastest growing contact centre channels: email management and chat management. In the following pages we examine the origins and evolution of these two communication channels, their use and deployment today and in the future. For each of the channels we breakdown the benefits and shortcomings associated with each and provide high level budgetary guidance. The goal of this report is to equip the reader with an understanding of these communications tools, the role that they can play in serving customers through a contact centre and the likely costs, risks and benefits. No specific technology providers are identified in this report.

Email and chat management may seem to have come out of nowhere from a contact centre perspective but each has been in use outside of contact centres for many years. Email as a business and then a consumer communications tool has existed for twenty years and instant messaging the precursor of chat for more than a decade. So the technologies are not new, but what is new is the mass adoption of these communication tools by consumers. As adoption and utilization of these tools increased so has the pressure on organizations to offer these channels as means of communicating with the organization.

These communications and specifically the vendors that sell these communications technologies paint a rosy picture of reduced costs, happier and more satisfied customers and ROI (Return on Investment) models that strive to make purchase look like a foregone conclusion. There is less discussion regarding some limiting factors associated with these communication channels; how likely are your customers to want to chat? How comfortable are you as an organization with interrupting your customer on your website to ask if they want to chat? How broken is your current email approach? What performance improvements and/or cost savings can you really expect to realize?

Both email and chat are communication channels that millions of people will employ today. They can be wonderfully effective and efficient additions to many contact centres. By understanding their current use in contact centres, 9.4% of all contact centre communication in North America was by email and 2.4% was chat according to the 2008

US Contact Center Operational Review¹ it is possible to envision the impact upon your centre. By understanding the cost and deployment models available you can determine whether 'Hosted' (Software as a Service), 'Premise Based' or Hybrid represent the best solution for your centre and can develop ROI and breakeven analyses. The synergies possible to leverage a knowledgebase and templates to automate what has hereto for been a manual activity will reduce your per unit costs, but do you have a knowledge base?

¹ Published by Contact Babel

2. Introduction

Contact centres have been a key part of the business world for many years. For most organizations contact centres are the main and perhaps the only department communicating and managing the relationship with customers. Although throughout the years the name has changed from "Correspondence Department" to "Call Centre" to "Contact Centre", the main purpose has always been the same; to communicate with customers in an effective and efficient manner. The name change is simply more reflective of the tools and the technologies being employed in these centres. At the same time new technologies have evolved that today allow organizations and more specifically their contact centres to take a larger role in understanding and responding to customer needs.

2.1. Contact Centre Evolution

Early generations of contact centres were simply an office with several agents (or operators) who answered the phone calls, hence the name "Call Centres". Use of technology was minimal and limited to a PBX and phone sets. Customer files were kept on paper and there was no understanding or appreciation of customer behaviour. Later on, in the 1970's, ACD's were introduced to the centres in order to facilitate distribution of calls and to increase the efficiency of the centre.

Computers, in the form of main frame and eventually PC desktop networks, were the next steps in this evolution. Customer files as well as information about products and services were stored on the system which allowed agents to access them with greater ease. These systems were often labeled as Customer Information Systems (CIS) and were the earliest form of what today is considered as CRM or Customer Relationship Management Systems. Although these steps changed the internal operation of the centres, they did not change the way customers were communicating with the companies.

Introduction of Interactive Voice Response (IVR) systems allowed centres to better route and direct the calls to qualified personnel and perhaps to a limited number of self serve and/or general enquiry (such as locations or hours of operation) options. Although the live calls remained the sole mode of two way communication, the new technology did bring relief to call centres by providing one way communication. Organizations created the very first generation of knowledge bases to be accessed by agents and by customers directly.

Introduction of the internet to the general public in the early 90's brought a significant change to the communication world. Organizations began to provide information about their products and services on their web sites and potential customers started researching products by browsing companies' web sites. As internet grew in popularity and acceptance by the general public, so did "Electronic Mail". Email had been in internal use for many years in large corporations (using main frames) but not accessible for most customers. By the

late 90's email from customers had generated enough volume that corporations needed to re-evaluate their thinking with regard to the "Correspondence Department". It soon became obvious that call centres were the most logical department to deal with this type of communication as they already had knowledge of corporate services and had access to customer files and the company's business applications.

The growth of the internet, along with other technologies, also impacted the customers' behaviour. The new generation of customers is part of a "Social Computing World" who is much more comfortable with computers and electronic media. S/he prefers (often demands) more information before making a purchase, to be able to perform many self serve activities, to have better access to her/his own file and most importantly be able to communicate in a time and method of her/his choosing namely phone, email or text messaging.

Contact centres are now in position to offer multi-channel media to their customers. The emerging technologies allow management to distribute the work load among their staff with ease regardless of the communication method or channel being used by customers while adhering to their quality standards for customer service. By doing so contact centres can also use the opportunity to increase their efficiency, lower the costs while improving customer satisfaction. In addition by offering more and more self serve options (building on customers' preference for self serve); contact centres can dedicate additional resources to focus on customer relationship management.

2.2. Customer Expectations

There is a growing generation of customers that is much more computer savvy. Use of the internet has also made customers more aware of their options in choosing products and services. At the same time, customers are now more comfortable with electronic media such as email and text messaging.

This social training combined with a more competitive environment for most products and services has forced companies to rethink their communication strategy. Long gone are the days of canned/generic replies and restricted access and modes (and hours) of communication. Today's customers expect to be able to contact businesses at their own convenient time and by their own choice of channel technology such as phone, email and web chat.

Preferring to communicate by email or chatting on the web, however, does not mean that customers have abandoned their requirements for friendly, knowledgeable and fast service nor has the value of the quality resolution diminished. In fact today's customers expect better, faster and more effective service than ever before. They expect to communicate with an agent that can respond to their needs with the most suitable products and/or services regardless of the communication method.

3. Industry Standards

There are many processes and procedures that are present in any best-in-class contact centres and are considered industry standards. However best-in-class centres utilize these standards to their fullest benefit and create "Best Practices". There are numerous best practices that cover various operational aspects of a contact centre. This report will focus on best practices related to the use of contact centre electronic media only.

3.1. Best Practices

<u>Communication options</u>, best-in-class organizations provide their customers with several communication options/channels and allow them to select and use their preferred method of communication.

<u>Single point of contact</u>, best-in-class organizations offer simple and easy to find points of contact for customers to use. All contacts, however, are handled through one integrated system. Such system directs all the incoming communications (web chat, email, voice call) to the appropriate staff regardless of the media being used.

<u>Access choices- Service provided 24 hours / 7 days</u>, best-in-class organizations offer communication options that allow customers to contact companies at a time that is convenient to the customer.

Exceptional service levels across all channels, best-in-class organizations set their service levels at targets that meet and surpass customers' expectations. They schedule their staff to ensure such service levels are reached (best-in-class contact centres reach their targets 95% of the time).

<u>Value-add applications</u>, best-in-class organizations offer value-add self serve applications to customers using IVR and web applications.

First contact resolution, best-in-class organizations make it a priority to resolve customers' issue on the first contact regardless of contact media. They design their processes, train their staff and utilize technologies in order to achieve a high percentage of First Contact Resolution (FCR) (best-in-class contact centres constantly achieve 90% FCR).

<u>Intelligent work station & comprehensive knowledge base</u>, best-in-class organizations provide their agents with state of the art work stations with access to a knowledge base that automates and/or minimizes routine activities and allows agents to focus on managing the relationship with customers.

3.2. Channels Distribution/Usage

The most recent "US Contact Center Operational Review"² indicates that emails are the largest non-call channel of interaction with contact centres (although IVR self serve applications are considered a type of interaction, they do not create any work load at the centre). Web chat was used 2.4% of the time which was slightly less than usage of regular mail (at 3.6%), however web chat usage is growing (see section 4.3.4). The following chart provides the breakdown of channels:



Channel Distribution

3.3. <u>Future Direction</u>

Most best-in-class organizations have implemented some form of multi-channel contact centres and that pattern continues to become a requirement for all contact centres. The stimuli for this shift are both external and internal.

External forces are from customers who are demanding convenient multi media access and from competitors who are already offering multi-channel contact centres, hence attracting more customers. Customers such as generation Y, whose behavior has been shaped by the events, technical developments and trends of their time are less patient than their parents and are looking for faster resolutions. *"The rise of instant communication technologies made possible through use of the internet, such as <u>email, texting, and IM</u>, may explain Generation Y's reputation for being peer-oriented and for seeking instant gratification"³.*

Internal forces, however, are the same as before. These are the corporate requirements which pressure the contact centre to operate in a constantly more efficient and effective manner. There has always been an emphasis to reduce

² US Contact Centre Operational Review, 2nd Edition - 2008

³ Wikipedia: Generation Y

operating costs while answering more customers and to increase customer satisfaction while increasing the sales and overall corporate profitability.

In a study conducted by the Aberdeen Group⁴, 88% of best-in-class companies indicated "Customer Demand" as a key factor in moving towards a multichannel contact centre followed by "Offered by Competition" at 69%. As the trend continues, these external forces become even more significant.

The good news is that implementing a multi-channel contact centre relieves internal pressures by operating more efficiently and at lower costs while providing a better customer experience and can result in increased customer loyalty, improved repurchase and lifetime value performance. By implementing a multi-channel contact centre as well as self serve options, organizations can shift and postpone the more routine or lower value activities and concentrate on more urgent, complex and value-add activities.

⁴ The Multi-Channel Call Centre Agent – January 2007

4. Emerging Communication Applications

For a call centre to become a multi-channel contact centre, it requires taking advantage of emerging electronic media in order to provide contact options to its customers.

4.1. Hosted vs. Premise Based

Before discussing each emerging technology, it is important to know how these technologies are implemented in contact centres. Contact centres by nature employ many applications including software and hardware. Traditionally contact centres, like many other organizations, would obtain and place the equipment and their associated software on their premises. Hence the name "Premise Based". In this environment the IT department within the organization would assume control of the application including installation, maintenance, and upgrades, etc. Agents would have access to each application either via their own PC, through a local network using thin clients and Local Area Network (LAN) or alternatively over the internet via a secure Virtual Private Network (VPN) or similar technologies.

As internet access becomes more widespread with faster connections we have seen the advent of "Software as a Service' or SaaS. With SaaS both hardware and software, required for each application, are 'Hosted' at the providers premise and the client's agents are provided with access to these applications. In this environment the vendors not only develop and maintain the application but also host it on behalf of the contact centre. In a hosted environment, the vendor takes responsibility for maintaining and upgrading the application as required.

There are advantages and disadvantages to each of these two choices. Hosted services generally offer the following:

- There is little or no startup cost (CAPEX) for implementing new applications,
- No installation of hardware or software is required and the system can be up and running in hours versus months for premise based,
- There is no requirement for in house IT support and/or expertise,
- Applications can be accessed from anywhere using internet connection (ideal for multi location centres),
- Applications are generally scalable, allowing the centre to grow or shrink with business requirements and not be restricted by applications usage limitations,
- In most cases there is no long term contract which equates to minimal risk for the centre,
- Data back up, maintenance and upgrading the hardware and software as well as dealing with viruses is the responsibility of the vendor.

There are certain drawbacks and concerns with any hosted services:

- The contact centre has very little or no control in upgrading, changing or operating the application,
- Initial capital expenditure is replaced by higher ongoing operating expenses (OPEX) when contrasted with traditional premise based technologies,
- Availability of consistent high speed internet access in remote areas (where less expensive labour can be used) may be an issue,
- As with any other internet services, there is a major concern with security. The more sensitive the data being stored, the higher the risk and higher requirements for more advanced security features.

Today, there are increasingly hybrid options that allow companies to purchase a 'hosted' solution and host it themselves on their premises. This approach can allay some of the security concerns as the 'Hosted' solution and all data can remain within the companies' direct control.

At the end, the choice of hosted, premise based or hybrid is not just a matter of finance or ease of implementation but rather a question of strategy and direction, as well as technical strength of internal resources for any given application.

4.2. <u>Email</u>

Although electronic mail (email) has been in use for many years (even before the introduction of the internet), its introduction to contact centres is more recent. Like many other technologies, its acceptance by the general business and then the general population has soared and gradually has become the first choice of communication for many computer savvy customers. With the growth of internet and the fact that every business requires a web site, visitors expect to have the option to contact the company by email if they choose to do so. In fact while most websites today offer an email address a minority of sites offer a telephone number. In most contact centres email messages are the second highest volume of contact types. It is worthwhile to note that while email overall represents just under 10% of total interactions, in some organizations; specifically technical support and/or help desk email volumes can equal or even exceed call volumes.

4.2.1. General

Email technology has been implemented in contact centres in numerous ways. In its simplest form, a general email address is provided for customers to contact the company. This often utilizes standard business email tools such as Outlook. In its most sophisticated form an "Email Response Management System (ERMS)" is used to send, receive, distribute and respond to messages. A complete ERMS can provide a great deal of functionality. It can:

- Identify key words within the email subject line or content and can then use established business rules to route the message to the appropriate mailbox, Individual or contact centre personnel.
- Provide an automated reply to the customer with confirmation and expected response time (this reflects the Service Level).
- When integrated with the ACD, ERMS can pull or push emails to the available agents and provide reporting of their email activities (productivity report) much like and often integrated with the ACD report.
- Leverage the corporate knowledge base to construct responses for the agents to use as templates in order to increase accuracy of the responses as well as efficiency of the agents.
- Employ a form of artificial intelligence to suggest responses, based on key word content, for the contact centre agent to choose from.
- Operate based upon 'business rules' that can create response templates, suggest content, manage escalations (time based and/or content based) and workflows

4.2.2. Advantages

There are many key components of an email system that can improve the overall effectiveness and efficiency of a contact centre and contribute to increased customer satisfaction.

First advantage of an email system is that it allows the customer to make a contact at their own convenient time. At the same time a reasonable service level for email is measured in hours and not in seconds. As 'non-live' work such service levels mean that the contact centres do not have to staff the centre for the peak email arrival time but rather use the down time (from live calls) to respond within targeted service levels while providing excellent customer service. Of course 'business rule' escalations can increase the priority on any email based upon the time that has elapsed since receipt and the desired Service Level. It is important to recognize the advantages of 'non-live' work. A call must be answered within 'x' seconds while an email response window is often 4 or more hours allowing work to be scheduled accordingly.

Intelligent email routing allows the system to automatically route the messages to predefined queues (division, department, skill based, work load or priority routing). The system also allows the entire file (including the original message and the appropriate response templates) to follow workflow routing. Workload routing could include SLA driven escalations (to ensure compliance with stated SLA parameters), as well as complaint escalations (i.e. from an agent to a supervisor for approval).

If required, many marketing materials, manuals or other required forms can be attached to an email so the customer can receive them immediately (along with reduction in usage of fax and more expensive mail systems).

Finally the cost of an email contact is considerably lower than a live voice call as many elements of the response can be automated and the actual time used by the agents are minimized. In fact some contact centres have managed to respond to up to 4 emails in a time equivalent for one voice call. A more conservative estimate is to assume that an email can be addressed and resolved employing ERMS at 1/2 the cost of a voice call.

4.2.3. Shortcomings

Although email is the first choice of communication for many customers it is not always the best to use. It may not be the best method to: understand the customer needs and behaviours; provide latest and most appropriate products and services; negotiating certain scenarios (such as a win-back situation). The very nature of emails as a thread of monologues rather than a dialogue can lead to misunderstandings and confusion. This effect can be further exasperated by the absence of tone, volume and inflection cues that we are so accustomed to in our voice dialogues. The elapsed time between receiving an email and responding to it also makes it impractical for urgent situations.

4.2.4. <u>Trends</u>

"E-mail and general browsing continued to be the most popular online activities from home. The web remained popular for finding government or health information and making travel arrangements. And many Canadians also used it for banking, paying bills and ordering goods or services."⁵

According to reports from Statistics Canada⁶ over 73% of Canadian age 16 and over went online for various reasons during 2007. This number represents a steady increase from previous survey (68% in 2005) with British Columbia showing the highest usage at 78%. A further review of the statistics indicates that email was the top activity for internet users (92%) across Canada. Another important factor was the age of the users. "In 2007, 96% of persons aged 16 to 24 went online, more than three times the 29% among seniors aged 65 and older".⁷

⁵ Statistics Canada, Daily Report - June 12, 2008

⁶ Statistics Canada, Daily Report - June 12, 2008

⁷ Statistics Canada, Daily Report - June 12, 2008

Although email has been provided to the customers as a communication option by every corporation for many years, the new breed of customers expect more than just an auto reply and a form letter with no dedicated or detailed information several days later. Best-in-class contact centres employ a sophisticated ERMS. The system provides automated responses (based on the content of the message), forwards the message to the appropriate queue (and qualified agents), and uses the knowledge base to provide the best possible template for each scenario. These

centres establish reasonable service levels (in the range of 2 to 24 hours) and monitor the email activities while providing special writing training to agents using proper business language.

The latest US Contact Centre Operational Review⁸ indicates that in 2008 emails accounted for 9.4% of all customer interactions which is an increase of 36% from 6.9% in 2007⁹.



4.2.5. <u>Costs</u>

Complete ERMS systems can dramatically improve speed and quality of email responses. They can also reduce the cost per email sent. The costs of acquiring and deploying such a system are not insignificant. Purchase pricing can easily run to more than \$100,000, plus annual maintenance. Hosted applications cost less initially, \$5000 for set-up with \$100 per agent per month. Which approach is best and most economical depends upon the volume and complexity of the organization acquiring the ERMS. Breakeven for Hosted versus Premise Based applications tends to be realized at month 20-24 at which point the total cost of ownership becomes lower with Premise Based solutions.

4.3. Web Chat

Another emerging technology (especially in contact centres) is "Web Chat". Web chat uses the text or instant messaging technology to create a live real time dialogue with the customers similar to a voice call except in a written format.

4.3.1. General

The introduction of internet to the business world and its influence in communication has been growing steadily. One element of the rise of

⁸ US Contact Centre Operational Review, 2nd Edition - 2008

⁹ US Contact Centre Operational Review, 1st Edition - 2007

the internet was the development of 'instant messaging' on a number of internet portals, such as AOL. Many younger customers are more comfortable sending and responding to text messages rather than speaking to a live agent. Texting has become very popular with younger audiences, so much so that a significant portion of wireless companies' traffic is text instead of voice. Also, considering that many customers initiate a search on an organization's web site before making a phone call, there is an opportunity to provide another communication channel and perhaps create a dialogue with the customer at the right moment.

Early generations of the chat option *-Static-* were simply a "Click to Chat" button on the company's web site that invited the customer to initiate a chat session. However, this option was not integrated with the ACD. The system could not predict if and when a live agent would be available to engage in the chat session and simply would put the customer in a virtual hold waiting for a live agent without being in the queue. This shortcoming could and did cause lengthy and frustrating wait time for chat users. Earthlink, a popular internet service company experienced thousands of chats holding in virtual queue waiting for an agent when they implemented this form of chat. Also, as the "Click to Chat" icon was always available to the customer, the agent would not know the purpose of the chat until much later in the conversation. The always "on" nature also meant that demand and access could not be managed and this lead to a number of challenges in delivering quality and responsive service.

The second generation of the chat option *-Dynamic-* is integrated with the ACD to know the load in the queue and when an agent will be available. In this option the "Click to Chat" button is only available when an agent can reply within a reasonable time frame or the defined service level. This eliminates potential lengthy wait times for customers and frustration that follows such waits. This second generation also saw the introduction of pre-chat surveys that asks the customer to identify themselves (name, account number, email address etc.) and the reason for the chat (purchasing assistance, returns, credits etc.)

The latest generation of chat technology *-Proactive-* deals with both issues of agents availability and allows the system to proactively offer assistance. First; it is integrated with the ACD to know, understand and predict availability status of the agents in order to provide immediate response to incoming chat requests. Second; it uses a predefined algorithm and business rules to decide if and/or when to offer a live chat option in order to help customers at their point of need. For example, a chat can be offered based on the amount of time that a visitor to the site is spending on product pages to assist the visitor in their search and perhaps create an opportunity to make a sale. In another example, a chat

session could be offered to a visitor searching for, but not finding, a manual. A chat session can also include a "co-browsing" option to aid customers complete their intended transaction (such as a self-serve activity) with the help of an agent.

4.3.2. Advantages

Once again there is value in allowing the customer to select the channel of communication. If they are surfing a website, then a chat may be more appropriate and convenient than placing a phone call and more immediate than sending an email. One of the main advantages to a chat system is reduced costs as compared to live voice contacts. It has been generally accepted that an agent can handle up to three chat sessions at the same time while the overall contact time remains the same, hence reducing the cost per contact by nearly 2/3.

We know that there are incremental investment costs and not every contact becomes a live chat. An analysis by Forrester Research (formerly Jupiter) predicts a small return on investment of about 15% is a likely return on investment in reactive chat. A much higher ROI of over 100% can be achieved by investment in proactive chat¹⁰.

Another advantage is potential for increased sale. As mentioned a chat session can provide timely information to a potential customer and offers the right products and services at the right time based on customer needs or perhaps directing the visitor to the appropriate section of the web site. Vendor research has stated that increased sales of 3-5% can be achieved through the implementation of proactive chat¹¹.

On a smaller scale, web chat can also be beneficial to hearing impaired customers who may not be comfortable or able to use the telephone.

4.3.3. Shortcomings

Similar to email, web chat relies on the written word to communicate with customers which does not provide a complete picture of the context and/or clients' emotions.

Web chats are also very new to contact centres which mean their utilization rates by customers are low (however this rate is growing consistently).

¹⁰ Forrester Research, The ROI of Interactive Chat - Feb 2008

¹¹ LivePerson

Toward a Multi-Channel Contact Centre, Email and Chat: Emerging Contact Centre Technologies Copyright The Taylor Reach Group, Inc. 2009

4.3.4. Trends

The use of electronic media in Canada is growing steadily. Options such as email and web chat are becoming part of main stream communication tools. Now more and more contact centres are providing *self-service* and applications that provide greater insight into the customer experience. Organizations are also considering how to support their customers more proactively.¹²

Although lagging behind email, use of web chat is growing in contact



Forrester Research also noted the growing trend in customers accepting chat as a viable communication tool. "... given that consumers who use chat report that it meets a broad spectrum of needs — from allowing rapid, personalized, and timely communications to direct interaction at the moment of need without having to get on the phone with a customer service agent. It can be such an effective mode of interaction that it may some day even replace email."¹⁵

4.3.5. Costs

The investment cost for a chat system can vary significantly based on the functionality of the service, size of the centre and number of visitors to the company web site. Ball-park expenses for a complete and integrated chat/email/voice for a mid size contact centre is estimated at \$100 - \$400 per agent per month with no initial capital expenditure in a hosted environment and \$100,000 or more for premise based solutions.

2.40%

2008

¹² Forrester Research, 2008 Contact Centre Technology Trends - August 2008

 ¹³ US Contact Centre Operational Review, 2nd Edition - 2008
¹⁴ US Contact Centre Operational Review, 1st Edition - 2007

¹⁵ The Forrester WaveTM: Customer Service Software Solutions - October 2008

5. Evolved Multi-Channel Contact Centre

5.1. Operations

How does a multi-channel contact centre operate? In essence the same way as any other contact centre. The centre requires available agents who can respond to incoming requests in a timely manner. Except now the centre must use appropriate technology, training, methodology, and processes that are applicable to all methods of communication.

5.1.1. <u>Who</u>

Although a few organizations tried to establish a separate group to deal with the influx of email (and perhaps later with the chat option) it soon became very clear that the best option is to integrate this work within the existing call centres. The agents are already trained to follow series of pre determined steps in dealing with customers using "Call Handling" processes while accessing the company's knowledge base as well as all customer related business applications. The call centre agents were trained to be the voice and the face of the organization and the addition of new technologies only help to expand their reach.

5.1.2. <u>How</u>

A multi-channel contact centre employs several technologies above and beyond typical call centres. An ERMS integrated with the ACD and the knowledge base controls the flow of the emails while a chat application connects the web site visitors to the contact centre. A more advanced web site can offer both chat and live calls to the visitors while taking requests for call back. Chat sessions and live calls are then put in the appropriate queue to be handled by the agents based on their skills or departmental roles. Workflows can also be established to escalate emails to a higher priority to ensure that the identified SLA is achieved. A call back will also be scheduled based on the input from the visitors and availability of agents.

Agents continue to take calls as they arrive but can also be scheduled to reply to emails or handle chat sessions. An ERMS can also monitor the agent status and "push" emails to them when there is no wait time in the queue. Using the technology and extended response time, one can shift the workload from peak time to down time.

Similar to a phone call, a chat session can be transferred to a different agent, bridged into a conference to include a supervisor or escalated to a higher level (technical support or complaints).

5.1.3. <u>When</u>

A time frame to establish a multi-channel contact centre in an existing centre must be analyzed and decided based on the corporate strategy. However, there are more and more expectations from customers who expect to connect with their various service providers from anywhere using any method or channel that they wish.

For new contact centres the question may be moot as multi-channel centres are becoming standards rather than exceptions as most best-inclass centres are operating as such. Centres with new technologies provide better customer service and customer satisfaction (if implemented correctly); they also increase the efficiency of the centre and reduce overall operating costs significantly. Also it is far more economical for a new contact centre to obtain all the required technology as an integrated suite that works together rather than trying to bring the pieces together later as an add on to an existing platform.

5.2. <u>Requirements</u>

The new and evolved Multi Channel Contact Centre will have to face new challenges and satisfy new sets of requirements. It is not enough to simply open the centre to receive all types of communication from customers, rather it is a key success factor to identify the new requirements, existing gaps and satisfy those gaps prior to creating a multi-channel centre.

5.2.1. <u>People</u>

Agents are the key component of any and all contact centres. They are the ones who are in contact with customers and are the link between customers and the organization.

In the past agents were expected to have excellent verbal communication skills. The new breed of agents, however, must also be capable of written communication. In many cases an email from the contact centre is considered a legal document hence the requirement for agents to be able to write documents in clear language with proper wording and grammar. Although templates are used in many instances, it is still essential that agents possess or be trained for proper written communication.

In fact organizations are urged to start looking at their recruiting, hiring, training, and coaching in a new light in order to create a complete and successful workforce.

5.2.2. Processes

Processes are the frameworks in which people (i.e. agents) use the technology to provide services to their customer. New technology means that new processes must be designed and implemented to make sure the centre is operating efficiently and effectively.

For example the "Work Force Management" process (i.e. Forecasting & Scheduling) must be revised to include the new work load from new channels, taking into account the targeted response time and service levels. "Call Handling" process must be adjusted to become "Contact Handling". Similarly "Quality Assurance" must include emails and web chat as part of a complete end-to-end quality program.

5.2.3. Methodology

When a contact centre evolves and changes its' operations to become a true multi-channel centre it must also consider adjusting the methodology being used in that centre. Service levels and ASA (Average Speed to Answer) take on a new meaning (see section 5.3), CSAT (Customer Satisfaction) and FCR (First Call Resolution) must include transactions conducted via electronic media, reporting must include all aspect of the contact centre operations and finally escalation must be designed to allow for email or chat sessions to be easily transferred to qualified personnel or higher authority as the case might be.

5.2.4. Technology

It may appear that the easiest aspect of the change is the technology. After all it was the emerging technology that initiated this evolution to a multi-channel centre. That is true. However, managing and integrating applications from various vendors has its' own challenges.

A new contact centre requires an ERMS (Email Response Management System) that can send, receive, and distribute emails among targeted agents while integrated with the ACD to insure proper load distribution. The system must also be able to provide "Intelligent Email Routing & Queuing" while using the knowledge base to create templates responding to each individual scenario.

The requirements for chat application are dependent on the centres' strategy and long term direction. A third generation application can analyze the customers' behaviour (on the company web site), link to ACD and determine when to offer visitors a chat session. The application should include intelligent routing to make sure that customer is connected to the most appropriate department/agent while providing immediate operational feedback to management such as number of offers, number of accepted offers, queue length, and average wait time.

5.3. Service Levels

It is well known that callers to typical call centres expect to get a live voice within seconds. Service level is explained in terms of percentage of calls being answered within a targeted timeframe as measured in seconds. An 80-20 service level indicates that the centre expects to answer 80% of its calls within 20 seconds. Since this indicator does not provide any information with regard to the remaining calls, a second metric is used to measure the Average Speed of Answer (ASA) for all the callers. In a typical call centre with a service level target of 80-20, one can expect the ASA to be about 14 - 15 seconds.

Service level for emails is measured slightly differently. Email response is measured in hours rather than seconds as customers do not expect to receive an intelligent reply within seconds. Although an ERMS can provide an automated reply with some relevant information, it cannot solely resolve an issue. On the other hand it is well expected to reply to 100% of the emails within a reasonable time. For those reasons, service levels for emails are shown as 90/4 meaning 90% of emails are replied within 4 hours. Service levels for emails often range from 100/2 to 90/72. Any target above 48 hours (or missed email) will have a negative impact not only on customer satisfaction but also on the operation of the centre as customers will follow up by either another email or a phone call while the original email is in the queue to be processed, increasing the total workload artificially.

The target service level for web chat is very much dependant on the technology being used and its integration with the ACD. Best-in-class companies use similar standards for their web chat as their live voice knowing that they can control/limit the number of sessions being offered to the site visitors. It is far better to offer a chat session to a few customers with minimum wait time than to offer it to many and not be able to respond in a timely manner. Standard Service levels include 90/20 or 90% of chats answered in 20 seconds to 95/5 for proactive chats in a sales environment.

Traditionally service levels have been a key component of customer satisfaction and even more critical to the call centres for scheduling purposes. The same can be said for a multi-channel contact centre.

5.4. Customer Input and Education

Like any other changes in a contact centre affecting customers, it is imperative to involve customers in the design and implementation stages. Where should a "Click to Chat" or "Send us an Email" icon be located on the web site? What criteria or business rules should be used to offer a proactive chat session? More input from customers leads to higher adoption rates by customers and therefore higher success rates.

As with any new technology there are always those who are more apt to try it and those who lag behind adopting new technology. Contact centres must provide excellent service with their chosen electronic media in order to ensure that their advanced or early adopting customers are not dissatisfied with their experience and will try it again when and as required. At the same time it is imperative to extend the new technology to other customers and allow them to select these channels at their own pace and to educate them to be able to use all the available options.

6. Summary and Conclusion

Introduction of the internet has had significant impact in the way individuals and companies communicate with each other. The internet has made email an ordinary mode of correspondence in every household replacing more traditional methods such as regular mail. In business it has reduced fax, courier and interoffice mail. While web chat does not enjoy the same popularity as email today, its acceptance as an alternative to voice conversation is growing steadily. A new, computer savvy generation who are familiar with electronic media is becoming a significant portion of customer base for many organizations. This generation prefers and often demands use of electronic media in communicating with his or her service providers.

Contact centres, by their nature, are in the business of communicating with customers. To reach more customers, contact centres are expanding their roles, their tools, and techniques. A multi-channel contact centre not only answers voice calls, but also provides communication via other mediums such as email and web chat. But that is not all. A best-in-class multi-channel contact centre also uses these emerging technologies to improve customer services by providing the right solution/answers at the right time with minimum effort. An ERMS receives, responds, analyzes and routes emails based on their content while a proactive chat program analyzes the bahaviour of a visitor (to the company web site) and offers a chat session in order to engage the visitor.

The operation of a multi-channel contact centre requires certain changes and/or adjustments to the centre's four pillars (people, process, methodology, and technology). These changes, although not a major deviation from an average contact centre, can and will have significant impact on operational efficiency (such as costs) and effectiveness (such as customer satisfaction). Best-in-class organizations use observed best practices to evaluate and analyze their requirements for a multi-channel contact centre and to close any existing gaps to achieve their goals.

Implementation options such as hosted and hybrid, although eventually more expensive than premise based, allow contact centre to implement these emerging technologies with minimum initial investment and minimized risk. Such options also allow the centre to expand its operations with the business requirements.

In the future, many more organizations will implement a multi-channel contact centre, as electronic media becomes increasingly more accepted by the general public, easier to implement, more cost effective and better aligned with the communication preferences of their customers.

It is imperative that organizations evaluate their contact centre strategy and respond to the needs of their current and future customers.

Appendix N BENCHMARK PORTAL – UTILITES INDUSTRY BENCHMARK REPORT



Utilities

Industry Benchmark Report

Best-in-Class Call Center Performance



Principal Investigator

Dr. Jon Anton

Center for Customer-Driven Quality™ at Purdue University



Utilities Industry Benchmark Report

Best-in-Class Call Center Performance

Principal Investigator

Dr. Jon Anton Center for Customer-Driven Quality™ at Purdue University

Content Editor

John Chatterley BenchmarkPortal LLC

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Table of Contents

Acknowledgements	V
CHAPTER 1: INTRODUCTION	1
CHAPTER 2: PARTIAL LIST OF BENCHMARK PARTICIPANTS	7
CHAPTER 3: UTILITIES INDUSTRY HIGHLIGHTS	19
CHAPTER 4: DETAILED BENCHMARK RESULTS OF THE UTILITIES	
INDUSTRY	53
CHAPTER 5: PERFORMANCE BY INDUSTRY	65
CHAPTER 6: BEST PRACTICES IN QUALITY MONITORING AND	
COACHING	69
INTRODUCTION	71
	71
SUMMARY OF RESEARCH FINDINGS SIGNIFICANCE OF RESEARCH FINDINGS	71
CORPORATE STRATEGY IMPACT	72
COMMUNICATING A CORPORATE STRATEGY OF QUALITY	73
PURPOSE OF QUALITY MONITORING	74
CALL MONITORING AND RECORDING OPTIONS	75
	76
	78 20
WHO DOES THE MONITORING	82
WHO SHOULD DO THE COACHING	83
STAFFING	84
BUILDING IN CONSISTENCY IN THE EVALUATION PROCESS	85
SHARING MONITORING RESULTS WITH THE AGENT	85
KEY PERFORMANCE INDICATORS	87
THE EMERGING MODEL FOR QUALITY MONITORING AND COACHING	90 91
CHAPTER 7: CALL CENTER CERTIFICATION	95
Call Center Assessments	97
The Steps in the Assessment Process	97
Introduction to Call Center Certification	98
How the Call Center Certification is Unique	99
The Certification Process	100
CHAPTER 8: BENCHMARKING METHODOLOGY: A CASE STUDY	103
Introduction	105
Definition of Case Study Terminology	105
Case Study Specifics	107
why and now to benchmark a Gail Genter	108

i

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The In-Depth RealityCheck™ Peer Group Performance Matrix	110
The In-Depth RealityCheck™ Balanced Scorecard	111
The In-Depth RealityCheck™ Inbound Performance Comparison Report	112
The In-Depth RealityCheck™ Performance Ranking Report	113
Results and Conclusions	113
References	114
CHAPTER 9: PRINCIPAL INVESTIGATOR	115
APPENDIX I - FREQUENTLY ASKED QUESTIONS	119
APPENDIX II - TONCHEV PERFORMANCE INDEX	125
APPENDIX III - PRODUCTS AND SERVICES	133
APPENDIX IV - GLOSSARY OF TERMS	157

List of Figures

Figure 1. Kind of calls handled	22
Figure 2. Inbound call types	23
Figure 3. Reasons for inbound calls	24
Figure 4. Outbound call types	25
Figure 5. Reasons for outbound calls	26
Figure 6. Call center annual budgetary allocation	27
Figure 7. Average cost per inbound call	28
Figure 8. Outbound cost per call	29
Figure 9. Average Service Level	30
Figure 10. Average speed of answer	31
Figure 11. Average call handle time	32
Figure 12. Average abandon rate	33
Figure 13. Percent of calls closed on first call	34
Figure 14. Agent occupancy percentage	35
Figure 15. Percent of up-sell and cross-sell opportunities	36
Figure 16. Up-sell and cross-sell opportunities that result in sale (conversion rate)	37
Figure 17. Call centers that have a formal mechanism to gather customer feedback	38
Figure 18. Percent perfect customer satisfaction perfect scores	39
Figure 19. Percent callers that gave the lowest score for customer satisfaction	40
Figure 20. Annual full-time Agent turnover rate for the Call Centers & Outsourcing Industry	41
Figure 21. Hiring cost of a new agent (agent)	42
Figure 22. Length of new-hire training period	43
Figure 23. Agent labor union representation	44
Figure 24. Call volume handled by part-time agents	45
Figure 25. Call centers integrated with other customer access channels and touch points	46
Figure 26. Features offered on company Web sites	47
Figure 27. Percent of inbound calls handled by self-service	48
Figure 28. Percentage of self-service contacts by contact channel	49
Figure 29. Percentage of call centers that outsource	50
Figure 30. Percentage of calls/functions outsourced	51
Figure 31. Industry performance matrix	67

iii

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Example of the seal as depicted on the banner (top). Example of Certificate of	
Center of Excellence awarded by The Center for Customer-Driven Quality at	
Purdue University. Signed by Dr. Jon Anton (bottom).	101
Figure 34. Peer Group Performance Matrix	110
Figure 35. Balanced Scorecard	111
Figure 36. Inbound Performance Comparisons	112
Figure 37. Peer Group Ranking Report	113

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I want to thank the thousands of participating call center managers that help keep our database current and compelling. I also want to acknowledge the hundreds of call center solution vendors that sponsor our benchmark research at Purdue University.

Dr Jon Anton Center For Customer-Driven Quality Purdue University

CHAPTER 1:

INTRODUCTION

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1
The Importance of Benchmark Research

Over the past few years, companies in most industries have migrated their low-tech call centers from back office support to the front-line of their enterprise. In this migration, call centers have become e-business contact centers, and have been outfitted with the latest in high-tech hardware and software for both voice and data applications. In addition, the focus has shifted from a singular point-of-contact via telephone calls to multiple points of customer access, including e-mail, fax-mail, kiosk, and the Internet. The evolution and integration of these electronic customer "touch-points" is continuing to accelerate, augmented by high-technology speech and data solutions that automate the contact handling process, which are transforming the customer contact experience.

Driving e-business contact center development is the growing awareness that managing customer relationships is a key driver of bottom-line profits. Today's customers greatly value timely accessibility to information. In fact, the vision of the customer e-business center of the future is to allow customers access to information:

- at any time
- from anywhere
- in any form, and
- for free.

This ease of customer access is fast emerging as a critical element of global business strategy. In the not-too-distant future, customers will deal preferentially with those companies that are deemed to be most accessible in terms of mission-critical information that is seamlessly integrated throughout all customer touch points.

As the "lightning rod" for customer interactions, world-class e-business contact centers are becoming the single point of contact for customers. According to research conducted at Purdue University, over 90% of customer interactions presently occurs through e-business centers and the Internet. Fueled by tremendous advances in the integration of telephone and computer technologies, the e-business center has emerged as a company's most potent weapon for maintaining long-term customer relationships.

For many companies, global competition has reduced products to mere commodities that are difficult to differentiate through features, functions, or price. Having reached parity, where price and quality are the "table-stakes" of doing business, the paradigm shift is definitely toward customer acquisition, customer accessibility, customer satisfaction, and customer retention aimed at improving the customer lifetime value.

Even in cases where a company can claim some competitive advantage in terms of product, service, or market segment, the customer contact functions remain crucial keys to customer perceptions and loyalty.

Today's customer service e-business center is an ever more important link in building business-to-business relationships, as well as relationships between a business and its

end-user customers. The cost and performance of a center can be critical to its success. From reviewing the industry data, we conclude the following:

"Spend too little and perform poorly, and your contact center becomes a business liability that consistently drives away customers and creates market damage. Conversely, spend too much and over-perform, and your center again becomes a financial loss to the company. If you spend efficiently and perform effectively at a level just better than your competitors or peer group, your call center will most likely be a profit center for the company, i.e., acquiring, growing, and retaining profitable customers."

—Dr. Jon Anton, Call Center Benchmarking, Purdue University Press, 1999

Executives are beginning to recognize the potential of the e-business center as a significant revenue generator, perhaps one of the surest investments they can make in enhancing and creating customer value and bottom-line profits. The return on investments made in customer accessibility is seldom less than 100% in the first year, and frequently even more if customer lifetime value is included in the calculation.

Herein lies the challenge and the primary reason to benchmark your center's performance metrics against your peer group, as well as centers representing best-in-class performance. Benchmarking your e-business center performance against a Peer Group of similar centers is a mandatory step in becoming and staying competitive. This vital information, updated constantly, enables managers to remain competitive in a cost-effective manner. The Purdue / BenchmarkPortal Research, now in its eleventh year, has the following unique attributes:

- It is a unique source for real-time best practice performance measures.
- Competitive benchmarking reports for Peer-to-Peer comparison are available within a week after your company's performance data is obtained.
- Performance is compared to a Peer Group with similar functional characteristics (apples to apples) defined by you, the participant.

All the reports are excellent tools to identify gaps in your performance, and therefore areas in which your e-business center needs attention. While these reports should not be used as the only source of your e-business contact center's performance improvement assessment, they are valuable to pinpoint areas that need more detailed analysis and action.

Also, BenchmarkPortal maintains a staff of contact center auditors, i.e., in-house experts and third-party consultants, who have been certified by Purdue University to help you gather and input data and to interpret your e-business benchmark results. They can

assist you in finding the "low-hanging fruit" in terms of improvement initiatives that will maximize your performance at a minimum cost.

It is our hope that the information contained in this report will not only prove useful in and of itself, but will stimulate an understanding of, and interest in, the use of benchmarking metrics as an indispensable tool for continuous performance improvement.

For questions contact Dr. Jon Anton: 805.614.0123

For your individualized report go to <www.BenchmarkPortal.com>.

CHAPTER 2:

PARTIAL LIST OF BENCHMARK PARTICIPANTS

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9

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11

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13

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NCR-Call-One NCS NCS Pearson NDC Health Nebraska Furniture Mart **NEN Life Science Products** NetEx. Inc. Netfor Netsales Network One Nevada Power New Benefits, Inc. New Century Energies New York Higher Education New York Life New York State Division of Criminal Justice Services New York Times NH Electric Cooperative, Inc Nissan Motor Acceptance Corporation NNC Group Nolo.com Norstan Communications Inc. North FL Education Credit Union North Texas Tollway Authority Northeast Utilities Northern Indiana Public Service Co. Northern Tool & Equipment Northern Trust Company Northrop Grumman Northwest Utilitiess, Inc. Northwest Education Loan Association Northwestern Memorial Physicians Group Northwestern Mutual Life Northwestern University Novartis NRG N'site Solutions Inc. Numerica Credit Union Oak Brook Bank Oak Trust Credit Union Oakley, Inc. ODOT/DMV OEConnection.com Office Depot Ohana Foundation OhByGosh **Ohio National Financial Services** Oki Data Americas. Inc. **Omaha Steaks**

Omron Healthcare, Inc. OnCall Healthcare Communications One Cigna Health Care OneMade **OneSource Solutions Center** OnPoint **Option One Mortgage** Optiva Corporation Oracle CRM Global Consulting Orange County's Credit Union **Orcom Solutions Oregon Catholic Press OSRAM Sylvania** Otis Spunkmeyer Inc. Overton's **Owens Corning Oxford Health Plans** P&C Select, Inc. **P&H** Mining Equipment Pacific Interpreters **Pacific Scientific** PacifiCare Health Systems PacifiCorp Paper Mart ParTech. Inc. **PARTNERS Health Plan** Patterson Dental Supply Co. Payless Cashways, Inc. **Payless ShoeSource** Paymentech PBD PCTV/SpeedChoice **Pearson Government Solutions** Penske Truck Leasing Pentax Vision, Inc. Pepsi-Cola General Bottlers, Inc Percepta **Peregrine Systems** Permanent General Companies Perot Systems Healthcare Pershing PharmaCare Philadelphia Federal Credit Union Phillip Morris phobo.com Phoenix Group Phoenix Life Insurance Company Phoneby Physerv LLC Physicans Mutual Insurance Co Physicians Mutual / Physicians Life Insurance Company

Picus, LLC Piedmont Natural Gas Company Pier 1 Imports Pilgrim Telephone, Inc. **Pilot Network Services** Pink Dot Inc. **Pinkerton Services Group** Pitney Bowes, Inc. Plant Equipment Inc PNC Banks **PNNL** Policy Studies Inc Polo Ralph Lauren Popular Club Popular Club Plan Pottery Barn PowerHouse Powertel **Prescription Solutions PricewaterhouseCoopers Primary Network** Primerica Life Insurance Principal Financial Group Princor Financial Services Corp Procter & Gamble **Professional Accounting** Solutions, Inc. PROFITsystems, Inc. **Progressive Insurance** Companies Promero, Inc. Prometric Provident Provident Bank of Maryland Providian ProxvMed Prudential PSINet Pubic Debt Public Employees' Retirement Association of Colorado Public Utilities Commission of Ohio **Publications & Associations** Centrobe **Publishers Clearing House** Pulte Homes Inc QRS QUALCOMM, Inc. Qualex. Inc. QuikTrip Corp. Quorum Health Group, Inc. QWEST Dex **Radio Systems Corporation**

Rainforest Cafe Ravovac **RBC** Liberty Insurance Co. Redstone Federal Credit Union Regional Income Tax Agency **Regional Water Authority Regions Financial Corp** REI Reimbursement Technologies, Inc. Relco/Reliable Automotive Reliant Energy **Renaissance Credit Services Replacements Ltd** Reynolds and Reynolds RInbound RMIC **Robbins Auto Parts Roche Diagnostics Rockwell Automation** Rodale, Inc **Roku Technologies** Roll up Account - Public Dept ron weber and associates **Roval Credit Union RTM Restaurant Group** Rug Doctor, L.P. Rural/Metro Corporation **Rutgers University** S. Adams Inc. Sabre. Inc. SAFECO Life & Investments Safelite Glass Corporation SafeRent, Inc. SAFILO USA Sage Publications Sage Results SAIC Saint Lukes Health System Salt Lake Community College Sample Company Sandy Spring Bank Sartomer Company S-B Power Tool Company SBC **SBI Bancshares Inc** SBVS SCANA Services, Inc. ScanSoft, Inc ScanTron Scantron TSM SCB Enterprise Solutions SCG Schindler Elevator Corp

15

Schools Financial Credit Union Schwan's Schwan's Sales Enterprises Scientific-Atlanta, Inc. Scitex America Corp. Scudder Investments SDP Sears SeBS. Inc Securities America Sedawich CMS SEFCU SEI Information Technology **SEI Investments** Selective Insurance Seneca Corporation Sentinel Technologies Sento Corporation Sentry Insurance Service Resources Inc. ServiceNet Sharp Health Plan Shields MRI Shurgard Storage Inc. **Siemens Building Technologies** Siemens Energy & Automation SiaFX Siggins Company, Inc. Sigma-Aldrich Silver State Schools Family CU Simens Building Technologies Simplex Time Recorder SISNA SITA/EQUANT SITEL Latin America SkillPath Skylight Financial Skymall Slic.com SME Smith & Nephew, Inc **Snap-on Tools** SoCalGas Social Security Administration SoftMed Systems, Inc. Software Spectrum Solo Cup Company Sonsio Sony e-Solutions Southbanc Southern Farm Bureau Casualty Ins. Co. Southern Progress Corporation SouthTrust Corp.

Southwest Credit Sovietski Collection Sparkling Spring Water Co. Sparta Special Data Processing Specialty Laboratories Specialty Outsourcing Solutions SPECTRUM Human Resource Systems Corp Spiegel, Inc Spokane Teachers Credit Union SPRINT SPSS Inc. SPX Corporation SRT Communications Inc SSM Health Care - St. Louis St. Francis Bank St. Vincent Hospitals and Health Services Staff Leasing, Inc Stage Stores, Inc. Standard Insurance Company Standard Register Stanford University Staples. Inc. Starbucks Coffee Co. Starwood Vacation Ownership State Farm Insurance State Industrial Products State of NC Child Support **Enforcement Client Services** State of Wisconsin Dept Workforce Development Statline STERIS Corporation Stewart Enterprises, Inc. Stream International, Inc. Streamline.com Strong Capital Management Stylin Concepts Sub Zero Freezer Co. SubmitOrder Summit Bank Sumter Electric Cooperative, Inc. Sun International Sun Life of Canda SunAmerica Sunbeam Health and Safety Sundance Catalog Company Sunmark FCU SunTrust Online, Inc. Superior Supplynet, INC Support Technologies, Inc.

Swarovski North America Limited Svbase, Inc. Symantec Corporation Symbol Technologies, Inc. Synectics Group, Inc. Synovus Financial Corp. T.Shipley Taction Target **Tarsadia Hotels** TB Wood's Inc TCF Bank TCS TDS Metrocom TEAC America Inc. Tech Data Corp **Teco Peoples Gas** Telamon Corporation TeleCheck **Tele-Direct Call Centers** Teledyne Water Pik **Teleflex Morse** TeleService Resources Telhio Credit Union Telkins Tel-Us Call Center Inc. Telus Hydro **Tender Heart Treasures TEPG Simplex TERI**, The Education Resources Institute Tersol & Associates **Texas County & District** Retirement System Texas Guaranteed Student Loan Corp **Texas Mutual Insurance** Company Thales Navigation The Arizona Republic The Beryl Companies The Bradford Exchange The CBORD Group The Cleveland Clinic Foundation The Credit Store The Customer group The Dallas Mornning News The Grove Park Inn The Hartford Insurance Group The Home Depot The HON Company The Integrity Companies The Mark Travel Corp

The MEGA Life & Health Insurance Company The Mony Group The New York Times The Order People CallCenter Svcs The People2People Group The Psychological Corporation The Research Group The Ritz Carlton Reservations Center The Sacramento Bee The Schwan Food Company The Service Center The Signal The Spiegel Group The Standard Insurance The Summit Federal Credit Union The Sutherland Group The Thompson Group The Vanguard Group Thompson, Ross & Associates Thomson West thyssenkrupp elevator **TIAA-CREF** Tie Solutions, Inc. TIME TiVo Inc Towers Perrin TPMG TradeCard Trammell Crow Co. **Trane Federal Credit Union** Travel Group International Travelocity.com Travis credit union Triad Financial Corp. **Trinity Systems Technologies** Triple S **Truliant Federal Credit Union Trustmark Insurance** TSIG.com **TSYS-BPM TU Electric Tucson Electric Power** TV Guide **TXU Energy Services** U.S. Department of Commerce U.S. Department of Energy U.S. Inspect U.S. Tire & Exhaust UAL

UC San Francisco Medical Center UCLA **UCSD Medical Center** U-Lane-O Credit Union UMWA Underwriters Laboratories Inc. Unicor Uniform City Express Unilever Union Bank of California Union Pacific Railroad United Utilitiess United American United Messaging **United Parcel Service** United States Gypsum Company United Way Unity School of Christianity Universal University of Miami Medical Group University of Michigan Health System **UnumProvident Corporation US Balloon Company US House of Representatives** US Inspect **US** Online **US Postal Service** US West Wireless USAA **USF** Physicians Group USFilter UtiliCorp United Valspar Corporation ValueVision Vanderbilt University Medical Center Vanguard Group VANS WorldCom Vantage Federal Credit Union VCU Health System Vector Marketing Corporation VeriCenter Verio Verizon Communications Verizon Wireless **VESystems** VetConnect Systems, Inc Viastar Services Corporation Victoria Secret Viking Freight

Visa International Vision Service Plan Vistakon/JNJ Visual Services Inc Vita-Mix Corporation **Voice Power Utilities** Volkswagen on America Volvo IT North America Vsource VSP Vytra Health Plans W.M. Berg Inc. Wachovia Bank Walker Advertising, Inc. Warn Industries Washington Mutual Washington State Employees Credit Union Watkins Motor Lines WEA Insurance Group Webster Bank Welch Allvn Inc. WellPoint Health Network Wells Fargo Wenn/Soft Inc. Wescom Credit Union West Corp West Group Western FCU Western Reserve Life (Aegon Equity Group) Whirlpool Corporation Williams-Sonoma Winstar Communications Witness Systems Wm. Wrigley Jr. Company Woodmen Life Insurance Society Woods Eq Co Woodwind & Brasswind World Wide Aquatics WorldCom Worldspan WPCU WSRC Xerox Engineering Systems XM Satellite Radio, Inc. Yellow Freight **YHD** Foxtons Young America Corp ZC Sterling Ziptone LLC Zouire Promotional Marketing **Zurich Services**

17

CHAPTER 3:

UTILITIES INDUSTRY HIGHLIGHTS

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Introduction

The online benchmarking questionnaire of key performance indicators (KPIs) consists of over 105 individual data points (see Chapter 4), which are entered into our call center database. Purdue/BenchmarkPortal's call center database, now in its ninth year, has grown to several thousand call centers spanning twenty-nine vertical industry sectors, both inbound and outbound, private and public, domestic and international. The benchmark report is aimed, in particular, at call center managers and senior executives.

In this chapter, we graphically highlight the answers that respondents, typically call center managers, offered to selected questions related to their call centers. We also depict benchmark comparisons between the Utilities Industry Average and Best of Utilities Industry Average (upper quartile).

Some of the high-level results include the following:

- call center staffing averages 117 full-time agents and 24 part-time agents
- average call center budget is \$8,986,996 annually
- inbound call volume averages 2,234,575 calls annually
- outbound call volume averages 280,685 calls annually

The detailed benchmarking report of the Utilities Industry showing the averaged responses by call center managers to all 105 data-points and key performance indicators can be found in Chapter 4.

This chapter is subdivided into seven section categories, as follows:

Section One:	Call Center Classification
Section Two:	Call Center Costs
Section Three:	Call Center Performance
Section Four:	Customer Satisfaction
Section Five:	Human Resource Management
Section Six:	Process & Knowledge
Section Seven:	Outsourcing

Section One: Call Center Classification

In this section we graphically depict the answers that call center managers gave to questions related to their Call Center Classification.



Figure	1.	Kind	of	calls	handled	
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Question:	What kind of calls does your call center handle?
Finding:	Across the Utilities Industry, the kind of calls handled is equally split between call centers handling both inbound and outbound calls, and call centers handling only inbound calls.
Interpretation:	Call centers across the Utilities Industry handling only inbound calls are not leveraging their resources to achieve the greater efficiency that could be gained by using time when inbound traffic is low to schedule outbound calls for cross-trained agents.



Figure 2. Inbound call types

Question:	Of the calls handled annually by your Agents, how do they breakdown in the following two categories?
	Business to Business (B2B),Consumer to Business (C2B)
Finding:	C2B calls constitute the majority of the inbound call volume in the Utilities Industry.
Interpretation:	These calls are most likely to be for customer service inquiries, technical support, or order taking/tracking, which represent the major reasons for inbound calls as shown in the next figure.



Reason for Calls - Inbound

Figure 3. Reasons for inbound calls

Question:	Which functions do your agents provide regarding inbound calls?
Finding:	Over two-thirds of all inbound calls across the Utilities Industry are for with customer service questions and inquiries.
Interpretation:	Calls for the top reasons, i.e. customer service and order taking/tracking constitute over 83% of all inbound call volume.



Figure 4. Outbound call types

Question:	How do your outbound calls break down in the following three categories?
	 Business to Business (B2B), Business to Consumer (B2C), and Helpdesk (internal)?
Finding:	The majority of outbound calls are Business to Consumer calls as reflected in figure 4 above.
Interpretation:	The outbound calling pattern for B2B clients is similar to the inbound calling pattern shown in figure 2, with follow-up to inbound calls representing the majority of the outbound call volume, as reflected in the next figure.



Reason for Calls - Outbound

Figure 5. Reasons for outbound calls

Question:	Which functions do your agents provide regarding outbound calls?
Finding:	Over four out-of-every seven outbound calls are for follow-up to inbound calls, with collections representing over one-fourth of their outbound calls.
Interpretation:	Follow-up to inbound calls and collections represent nearly three- fourths of all outbound calls across the Utilities industry.

Section Two: Call Center Costs

In this section, we graphically depict the answers that call center managers gave to questions related to their Call Center Costs.



Figure 6. Call center annual budgetary allocation

Question:	What is your annual budgetary cost breakdown by major cost category?
Finding:	Human Resource costs constitute over seven-tenths of the annual budgetary expense for call centers across the Utilities Industry.
Interpretation:	Human resource cost is the best single area for any call center to investigate for cost reduction initiatives such as agent retention programs to reduce turnover, reducing live-agent staffing by adding or increasing caller self-service options, offshore outsourcing, etc.



Average Cost per Inbound Call

Figure 7. Average cost per inbound call

Question: What is your average cost per inbound call?

Finding:The Utilities Industry Average cost per call is more than double the
cost per call of the Best of Utilities Industry Average.

Interpretation: With an industry average of over 2 million inbound calls handled annually, just a 2% reduction in the cost per call would represent a savings of over \$121 thousand dollars annually. Our research shows cost per call as the one of the most closely watched performance measures that call center managers use to determine their call center performance.



Average Cost per Outbound Call

Figure 8. Outbound cost per call

Question:What is your average cost per outbound call?Finding:The Utilities Industry Average cost per outbound call is significantly
greater than the average cost per outbound call of the Best of
Utilities Industry quartile.Let use the Utilities Industry average cost per outbound call of the Best of
Utilities Industry quartile.

Interpretation: Given the Utilities Industry Average annual outbound call volume of 280 thousand calls, the cost per outbound call for the Best of Utilities Industry represents more than \$2.1 million dollars in lower annual costs than the Utilities Industry average cost per outbound call for the equivalent call volume. Our research shows cost per call as one of the most closely watched performance measures that call center managers use to determine their call center performance.

Section Three: Call Center Performance

In this section, we graphically depict the answers that call center managers gave to questions related to their Call Center Performance.



Figure 9. Average Service Level

Question:	Within how many seconds are 80% of your calls answered (Service Level)?
Finding:	The average number of seconds required to answer 80% of the calls for the Utilities Industry is 17% greater than the average time for the Best of Utilities Industry.
Interpretation:	This key performance metric is often referred to as "Service Level." and is calculated as follows:
	<u>Calls answered in less that "X" seconds</u> (Calls offered) times 100
	The best practice Service Level goal is to answer 80% of the calls within 20 seconds, which none of the call centers in the Utilities Industry have achieved.



Average Speed of Answer

Figure 10. Average speed of answer

Question:	What is your average speed of answer in seconds?
Finding:	The Best of Utilities Industry average speed of answer (ASA) is 11.4% less than the average for the Utilities Industry.
Interpretation:	Average speed of answer is equal to the total time in queue divided by the total number of calls answered. This includes both technology-handled calls as well as live agent calls. This data is available from the ACD. Average speed of answer is directly tied to service level. Best practices goals for ASA is to answer the call within the first twenty seconds (before the 4 th ring).



Average Call Handle Time

Figure 11. Average call handle time

Question:What is your average call handle time in minutes?Finding:The Best of Utilities Industry average call handle time is 12% less
half the average call handle time of the overall Utilities Industry.

Interpretation: Average handle time (AHT), a key performance indicator or metric (KPI), is an internal metric that is the sum of talk time, hold time, and after call work time. AHT is one of the most closely watched metrics in a call center as an indicator of an agent's skill and productivity.



Average Abandon Rate

Figure 12. Average abandon rate

Question:What is your average abandon rate in percent?Finding:The Utilities Industry reported average abandon rate is 35% higher
than the average abandon rate for the Best of the Utilities Industry.Interpretation:Abandon rate is an internal metric of all calls that get connected to
the call center but are disconnected by the caller before reaching an
agent, automated self-service system, outbound trunk, or

information announcement. The abandon rate is the percentage of calls that are abandoned compared to calls received. Our research shows abandon rate as the number one most closely watched performance measure that call center managers use to determine their call center performance.



Calls Closed on First Call

Figure 13. Percent of calls closed on first call

Question: What is your percentage of calls closed on first call?

Finding:Call Centers across the Utilities Industry average nearly three calls
closed out-of-every four calls received, with the Best of Utilities
Industry call centers averaging eight calls closed on first call out-of-
every ten calls received.

Interpretation: Calls closed on first call, also known as "first call final," represents one of the most closely tracked metrics for a call center. It is the objective of the call center to resolve all calls on the initial call, but there are some instances when this is not possible, for instance, 1) callers requesting information that is not readily available to the agent, 2) callers reaching an agent who is not trained to properly respond to the caller, or 3) improper transferring of a call resulting in the caller hanging up. The best practices objective is to maintain an average of 85% or higher for calls closed on first call, which the Best of Utilities call centers have achieved.



Agent Occupancy

Figure 14. Agent occupancy percentage

Question: What is your agent occupancy in percent?

Finding:Agent occupancy average percentage for call centers across the
entire Utilities Industry is just over 75%.

Interpretation: Occupancy, or occupancy factor, is determined by taking the time that an agent is in their seat ready to answer calls as compared to the total number of hours that they are at work. Therefore, if an agent is at their desk and ready to answer phone calls 6 hours out of an 8-hour shift, the agent's occupancy is 75%. The best practice goal for occupancy is 85%.



Percentage of Up-Sell/Cross-Sell Opportunities

Figure 15. Percent of up-sell and cross-sell opportunities

Question: What percentage of calls give rise to up-sell/cross-sell opportunities?

Finding:The Best of Utilities Industry percentage of up-sell/cross-sell
opportunities is 10% below the overall Utilities Industry Average in
this important metric.

Interpretation: To up-sell is to sell a higher value product or option to an existing caller. A cross-sell occurs when an agent recognizes that the caller might be able to use another product from a totally different product or service area within the company. Training agents to up-sell and/or cross-sell opens up a valuable added revenue opportunity for a company, and what better time to approach a customer to "buy-up" or "buy-more" than immediately after satisfying the customer's reason for their call.



Calls that Result in a Sale

Figure 16. Up-sell and cross-sell opportunities that result in sale (conversion rate)

Question:	What percent of up-sell/cross-sell opportunities result in a sale?
Finding:	The percentage of up-sell/cross-sell opportunities that the Utilities Industry turns into a sale is about 1%.
Interpretation:	The up-sell/cross-sell conversion rate across the Utilities Industry indicates that agents are able to up-sell/cross-sell to 3.3 thousand callers annually. This is an important area of opportunity that every call center should pursue.

Section Four: Customer Satisfaction

In this section, we graphically depict the answers that call center managers gave to questions related to Customer Satisfaction.



Figure 17. Call centers that have a formal mechanism to gather customer feedback

Question:	Does your call center have a formal mechanism for gathering customer feedback on call center performance?
Finding:	About three out-of-every ten call centers across the entire Utilities Industry <u>do not</u> have a formal mechanism for gathering customer feedback on call center performance to determine the level of customer satisfaction.
Interpretation:	Internal key performance indicators can only tell management part of the story of how well they are serving their customers. In today's competitive world, customer satisfaction is a more significant market differentiator and competitive advantage than product features or price. No company can attain best practices certification without the presence of a formal customer satisfaction mechanism to collect customer feedback in place.


Figure 18. Percent perfect customer satisfaction perfect scores

Question:	Within the past 90 days, what percentage of your callers gave you a perfect score for customer satisfaction (<i>e.g.</i> , <i>a perfect score of 5 out of 5</i> , <i>or a perfect score of 7 out of 7</i>)?	
Finding:	The Best of Utilities Industry Average is 9% better than the Utilities Industry Average in perfect customer satisfaction scores given within the past 90 days.	
Interpretation:	: The best metric to be used for measuring the "true" level of customer satisfaction is the percentage of customers/callers who give a perfect score, provided that a valid statistical sample is taken	

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<u>Percentage of Callers that gave the Lowest Score</u> for Customer Satisfaction within the past 90 days

Figure 19. Percent callers that gave the lowest score for customer satisfaction.

Question:	Within the past 90 days, what percentage of your callers gave you the lowest score for customer satisfaction (e.g., a low score of 1 out of 5, or a low score of 1 out of 7)?	
Finding:	Only one out-of-every seventy callers in the Best of Utilities Industry awarded the lowest score to the call centers within the previous 90 days, compared to about one out-of-every forty–one callers across the entire Utilities Industry.	
Interpretation:	Tracking lowest scores is the flip side of collecting perfect customer satisfaction scores, and essential to the quality monitoring process of a call center. The next step is to classify these calls by category/agent, and feed the results into the agent coaching and training process to remedy the root causes.	

Section Five: Human Resource Management

In this section, we graphically depict the answers that call center managers gave to questions related to Human Resource Management.



Annual Turnover of Full-Time Agent Staff

Figure 20. Annual full-time Agent turnover rate for the Utilities Industry

Question:	What is the annual percentage turnover of your full-time Agents?	
Finding:	ling: The average annual turnover rate of full-time agents is less the one in-every six agents across the Utilities Industry, and one in every seven agents in the Best of Utilities Industry.	
Interpretation:	Turnover is the number of agents who left in the course of a year as a percentage of the total number of agents working during that same period, and is a major cost and quality factor for call centers across the Utilities Industry. Using exit interviews to determine the causes of turnover, and thereby gaining insight into controllable factors that can result in reduced turnover, is a best practice process that all call centers should use.	



Cost to Hire a New Agent

Figure 21. Hiring cost of a new agent (agent)

Question:	How much does it cost you to bring on a new agent (add recruiting, screening, training, etc.)?	
Finding:	The Best of Utilities Industry average 25% less than the Utilities Industry Average for new-hire recruiting, screening, and training.	
Interpretation:	th a 15.74% annual turnover rate of full-time inbound agents (see vious figure), call centers across the Utilities Industry average expense of over \$159 thousand dollars per year just to hire and in replacement agents. An excellent book on this topic, inimizing Agent Turnover" by Dr. Jon Anton and Anita Rockwell, vailable on our Web site at: <www.benchmarkportal.com store="">.</www.benchmarkportal.com>	



Figure 22. Length of new-hire training period

Question:	What is the average length (in hours) of your initial, new-hire training period for agents?	
Finding:	e Best of Utilities Industry devote 31% less time than the ilities Industry Average for new-hire training.	
Interpretation:	The length of time call centers devote to the training of their new- hire agents is an indication of the emphasis that they place upon efficiency of call handling, effectiveness of service, and caller satisfaction. It can also be a reflection of the effectiveness of their new-hire training program.	



Percent of Call Centers Where Agents are Represented by a Labor Union

Figure 23. Agent labor union representation

Question: Are your agents represented by a labor union?

Finding:Three-sevenths of the call centers across the Utilities Industry
report that their agents are represented by a labor union compared
with about three-tenths of the call centers within the Best of
Utilities Industry.

Interpretation: Call centers without labor union representation for their agents have greater flexibility to continually adapt their business models to better serve the evolving needs of their customer base and to remain competitive to changing market forces.



Call Volume Handled by Part Time Agents

Figure 24. Call volume handled by part-time agents

Question:	What percentage of your total call volume is handled by part-time agents?	
Finding:	9.2%, or about 283 thousand inbound calls per year for the average call center, are handled by part-time agents across the Utilities Industry, compared to one out-of-every eleven inbound calls for the Best of Utilities Industry is handled by a part-time agent.	
Interpretation:	The use of part-time agents for peak periods, as seasonal offset staffing, and for other scheduling and call flow balancing reasons makes good economic sense and opens up an additional labor pool to offset turnover. Parents with school-age children, retirees, and college students comprise the bulk of this valuable labor pool.	

Section Six: Process and Knowledge

In this section, we graphically depict the answers that call center managers gave to questions related to Process and Knowledge.



Figure 25. Call centers integrated with other customer access channels and touch points

Question:	Is the call center integrated with other customer access channels and touch points (for instance, e-mail, Web site, and FAX)?	
Finding:	Over half of the call centers across the entire Utilities Industry are integrated with other customer access channels and touch points, compared with three-fifths of the call centers in the Best of Utilities Industry quartile.	
Interpretation:	Today's customers expect more from companies than in the past. With most businesses and many consumers having Internet access, e-mail and Web site access have become a preferred alternative to phone calls (with the attendant prospect of being put on hold). The Internet has also opened up an array of self-service options that many customers prefer to use instead calling a 1-800 number.	



Features Offered on the Company's Web Site

Figure 26. Features offered on company Web sites

Question: On the Internet, which features does your Web site offer?

Finding:Almost nine out-of-every ten companies across the Utilities Industry
indicated that they support E-mail access as an Internet contact
channel option for their customers, and over two-thirds of the
companies offer a self-service option on their Web site.

Interpretation: Our research has shown that as customers become more sophisticated and computer enabled, their preference shift from the telephone to the Internet as their primary communication channel choice to correspond with companies, shop for new products, conduct account transactions, compare product features and pricing, etc.



Percentage of Inbound Calls that are Handled by Self-Service

Figure 27. Percent of inbound calls handled by self-service

Question:	Of all your inbound contacts, what percentage is handled by self- service?
Finding:	More than one out-of-every six calls across the Utilities Industry and more than one out-of-every five calls in the Best of Utilities Industry are resolved by caller self-service without "live" agent intervention.
Interpretation:	With agent hiring and labor costs representing two-thirds of the total operating budget, automating self-service options in the IVR to lower the agent staffing required to handle ever-increasing call volumes, thereby reducing the average cost per call, is an essential cost-savings initiative that every customer facing call center should consider.



Figure 28. Percentage of self-service contacts by contact channel

Question:	Of all your self-service contacts, what percentage is completed through self-service channels (e.g., IVR, Web site, Fax-back, E-mail, Kiosk, Other)?
Finding:	Self-service via the IVR constitutes the majority of the automated self-service transactions across the Utilities Industry, with Web site and E-mail self-service activity at 10% and 5% respectively.
Interpretation:	IVR self-service is still the most preferred option, especially when combined with an automated speech recognition system. However, we have observed a steady growth in customer self-service across the other contact channels.

Section Seven: Outsourcing

In this section, we graphically depict the answers that call center managers gave to questions related to Outsourcing.



Figure 29. Percentage of call centers that outsource

Question:	Does your center outsource any calls or functions?	
Finding:	Across the Utilities Industry, over one-fifth of the call centers outsource their calls/functions, compared to one-third of the Best of Utilities Industry call centers.	
Interpretation:	Given the high cost of labor across all call centers, outsourcing presents some tempting cost reduction alternatives. For some excellent books on outsourcing, visit our Web site at <www.benchmarkportal.com store="">.</www.benchmarkportal.com>	



Percentage of Calls/Functions Outsourced

Figure 30. Percentage of calls/functions outsourced

Question: What percentage of your total calls/functions do you outsource?

Finding: Contact centers across the Utilities Industry outsource more of their outbound calls/functions than their inbound calls/functions as reflected in Figure 30 above.

Interpretation: Our research indicates that contact center outsourcing alliances, both domestically and offshore, will increase across the Utilities Industry as more companies seek to control costs without sacrificing quality or customer satisfaction. For some excellent books on outsourcing, visit our Web site at <www.benchmarkportal.com/store>.

CHAPTER 4:

DETAILED BENCHMARK RESULTS OF THE UTILITIES INDUSTRY

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58.33% 0.00% 41.67% 69.60% 5.07% 8.76%
58.33% 0.00% 41.67% 69.60% 5.07% 8.76%
58.33% 0.00% 41.67% 69.60% 5.07% 8.76%
0.00% 41.67% 69.60% 5.07% 8.76%
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0.31%
14.24%
0.00%
39.99%
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3,703,514 262,908 10.65% 89.35%
3,703,514 262,908 10.65% 89.35%
3,703,514 262,908 10.65% 89.35% 15.37% 83.07%

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<u>Call</u>	Center Classification Questions (continued)	Utilities Industry Average	Best of Utilities Industry Average
9			
	Do you use an automatic call distributor (ACD) at your call center?		
	Yes	97.87%	100.00%
	No	2.13%	0.00%
10.	How many minutes of telephone usage are recorded annually by your call center's automatic call distributor (ACD)?		
	Minutes	10,106,437	17,106,452
11.	How many agents work at your call center?	117	153
	Part-time agents	24	26
12.	How many Full Time Equivalent (FTE) agents work at your call center?		
	Full-time Equivalents (FTEs)	129	166

	Utilities	Best of Utilities
all Center Costs	Industry Average	Industry Average
3. What percentage of your ongoing costs is for:		
Human Resources - salary, benefits, etc.	68.26%	61.98%
Human Resources - recruiting, screening, training	2.90%	4.40%
Telecommunications phone charges	9.00%	8.85%
Computer hardware	3.37%	5.19%
Computer software	2.10%	3.03%
Telecommunications equipment	4.77%	5.30%
Real estate (floor space)	6.33%	5.55%
Outsourced calls	0.60%	0.98%
Other	2.66%	4.72%
4. Milesticale (14)		
Annual Budget	\$8,986,996	\$9,611,017
5. How much are you paying the telephone company for your toll-free cal	ls?	
Cents per minute	6.49	6.68
6 What is your average cost per call in dollars?		
Average Cost per Call	\$6.38	\$2.61

a 11		Utilities	Best of Utilities
Cal	Center Performance Measures	Industry Average	Industry Average
17.	Over the past 90 days, what were your average inbound performance		
	time-based metrics?		
	80% of your calls are answered, on average, in how many seconds	48.94	41.82
	Average speed of answer in seconds	37.30	33.15
	Average talk time in minutes (includes hold time)	3.37	3.25
	Average after call work time in minutes	1.50	1.03
	Average time in queue in seconds	53.28	44.03
	Average time before abandoning in seconds	81.55	66.16
	Average sales value	\$1.00	\$0.00
18	Over the past 00 days, what were your everage inhound performance		
10.	norcontage based metrics?		
	Average abandoned in percent	5 19%	3 85%
	Calls resolved on first call in percent	74 20%	80.06%
	Calls blocked in percent	0.82%	0.89%
	Agent occupancy in percent	75.16%	75.02%
	Adherence to schedule in percent	86.06%	00.02%
	Autoreage attendance in percent	80.00%	84.68%
	Percentage of calls that result in a cale	1 00%	1 21%
10	Deer your cell center de env un celling/eress celling?	1.0070	1.21/0
19.	Does your can center do any up-sening/cross-sening:	20.510/	20.00%
	1es No	70.40%	70.00%
	100	/9.49%	/0.00%
20.	What percentage of calls give rise to up-sell/cross-sell opportunities?		
		16.17%	14.67%
21	What are your outbound performance metrics?		
	Cost per call in dollars	\$8.88	\$1.26
	Cost per sale	\$1.00	\$0.00
	Sales per bour	0.09	0.00
	Contacts per hour	13 38	15.00
	Average sales revenue per TSR per vear	\$142	\$0
	Average revenue collected per seat per shift	\$4 620 50	\$0.00
	Average sales revenue per seat per shift	\$0.59	\$0.00
	Trende sales revenue per seat per sint	ψ0.37	φ0.00

22. What is your average data entry error rate per thousand calls?

Errors per 1,000 calls	9.92	6.71

Caller Satisfaction Measurement		Utilities Industry Average	Best of Utilities Industry Average
23.	Does your call center have a formal process to collect the caller's satisfaction regarding their experience with how their call was handled?		
	DO have Formal Mechanism	71.43%	70.59%
	Do NOT have Formal Mechanism	28.57%	29.41%
24.	On average, in the past 90 days what percentage of your callers gave you a perfect score on the question, "Overall, how satisfied were you with the service you received during your call to our center?"		
		62.42%	69.46%
25.	On average in the past 90 days, what percentage of your callers gave you the lowest score on the question, "Overall, how satisfied were you with the service you received during your call to our center?"		
		2.41%	1.43%

Iur	nan Resource Measurement	Utilities Industry Average	Best of Utilities Industry Average
6	What is the notio of TSDs to supervisions (spon of control)?		
.0.	Agents per supervisor	16.11	15.71
7.	What is the annual percentage turnover of your full-time agents?		
	Annual Turnover	15.74%	14.16%
3.	As a percentage of total turnover, how does this breakdown into the		
	Turnover due to promotions	9 70%	14 44%
	All Other Turnover	90.30%	85.56%
9	How do you compensate your agents?		
	Base salary per year only	\$32.437	\$29.961
	Average hourly wage for front-line agents.	\$15.26	\$14.34
	What is the evenese annual selent of your supervisions?		
υ.	what is are average annual salary of your supervisors.	\$47,984	\$46,187
1.	What is the average annual salary of your call center manager?		
		\$74,534	\$71,228
2.	What is the average length (in hours) of your initial, new-hire training period for agents?		
		253.46	174.31
3.	How much does it cost you to bring on a new agent? (Add recruiting, screening, training, etc. Please, include all costs.)		
		\$7,829	\$5,881
۱.	Are your TSRs represented by a labor union?		
-	Yes	42.19%	29.41%
	No	57.81%	70.59%
5.	What percentage of your total call volume is handled by part-time agents?		
	aBours.	9.22%	8.91%

Process & Knowledge	Utilities Industry Average	Best of Utilities Industry Average
36. Is the call center integrated with other customer access chann touchpoints (for instance, e-mail, Web site, and FAX)?	els and	
Yes	57.50%	60.00%
No	42.50%	40.00%
37. On the Internet, which features does your Web site offer?		
Your call center's 1-800 number	100.00%	100.00%
A self-service option (e.g., a static FAQ section)	67.86%	85.71%
An automatic "call-back" button (using a separate phone line)	0.00%	0.00%
E-mail access	89.29%	100.00%
Voice over IP, or Internet call (allowing the TSR to talk to the cal	ller through	
the Internet phone line).	0.00%	0.00%
Instant Messaging (chat capabilities)	0.00%	0.00%
38. Of all your inbound contacts, what percentage is handled by s	self-service?	
	17.49%	20.94%
9. Of all your self-service contacts, what percentage is completed the following self-service channels:	l through	
9. Of all your self-service contacts, what percentage is completed the following self-service channels: IVR	l through 58.98%	57.74%
9. Of all your self-service contacts, what percentage is completed the following self-service channels: IVR Web site	1 through 58.98% 9.91%	57.74%
9. Of all your self-service contacts, what percentage is completed the following self-service channels: IVR Web site Fax-back	l through 58.98% 9.91% 6.35%	57.74% 17.56% 2.08%
9. Of all your self-service contacts, what percentage is completed the following self-service channels: IVR Web site Fax-back E-mail	l through 58.98% 9.91% 6.35% 4.95%	57.74% 17.56% 2.08% 4.42%
9. Of all your self-service contacts, what percentage is completed the following self-service channels: IVR Web site Fax-back E-mail Kiosk	l through 58.98% 9.91% 6.35% 4.95% 2.42%	57.74% 17.56% 2.08% 4.42% 8.34%

<u>Out</u>	sourcing	Utilities Industry Average	Best of Utilities Industry Average
40.	Does your center outsource any calls or functions?		
	Yes	29.17%	33.33%
	No	70.83%	66.67%
41.	What percentage of your total calls do you outsource?		
	Percent outsourced calls (inbound)	3.36%	3.01%
	Percent outsourced calls (outbound)	3.83%	4.67%

Facilities & Design		Utilities Industry Average	Best of Utilities Industry Average
42.	What is the total number of TSR workstations at your call center?		
	Seats	161.42	253.83
43.	How large is your average TSR cubical workspace?		
	Square feet	37.65	41.42
44.	How many total square feet does your call center occupy?		
	Square feet	27,766	41,389

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CHAPTER 5:

PERFORMANCE BY INDUSTRY

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Figure 31. Industry performance matrix

This "balanced score card" positions centers from different industries on a 2-by-2 matrix by plotting their efficiency and effectiveness indices. The Efficiency Index integrates those metrics that have an important impact on costs, while the Effectiveness Index combines metrics that correlate to mission accomplishment and customer satisfaction. Thus, industries with centers that are able to optimize customer-centric results, while containing costs, are found in the upper-right quadrant.

67

In sum, industries rated an "Asset" perform the best, "Liability" the worst.

CHAPTER 6:

BEST PRACTICES IN QUALITY MONITORING AND COACHING

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INTRODUCTION

The purpose of this study was to observe and document the quality monitoring and coaching processes of agents in world-class call centers. Our goal was to determine the current best practices for other call centers to meet or exceed.

We define a "world class call center" as one that effectively manages its agents' performance in terms of both quantity and quality. When we speak of "quantity," we are referring to an agent's ability to bring resolution to a call as efficiently as possible. "Quality" refers to the agent's ability to create and/or maintain loyal customers.

METHODOLOGY

The BenchmarkPortal team, led by Dr. Jon Anton and Anita Rockwell, reviewed a wide range of studies to identify the best quality monitoring and coaching practices of call center agents.

The following steps were used to determine best practices in call quality monitoring and agent coaching:

- A survey instrument was developed to ensure consistent criteria were used in the collection of quality monitoring and coaching practices. (See Appendix B.)
- World-class companies were identified based on their benchmark statistics and reputations for excellent service. We surveyed these companies and received hundreds of responses.
- Site visits were conducted to observe the call monitoring and agent coaching processes. This information was used to determine which call centers were effective and why they were effective.
- In-depth telephone interviews were conducted of many companies who are in our database to explore and understand the details of the call monitoring and agent coaching processes used.
- We collected and processed best thoughts from industry leaders.
- We conducted a literature search on monitoring and coaching to see what other researchers have found.
- The data was processed to enable us to produce aggregate statistics.
- Unique best practices were documented.

SUMMARY OF RESEARCH FINDINGS

After observing and interviewing front-line employees, center managers, human resources managers, quality assurance teams, training teams, senior leadership, and others, we found an amazing degree of similarity among the industry's best. All of the call centers we benchmarked shared a number of commonalities. These included:

71

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- Each had a strong corporate culture, which focused on doing more than just satisfying its customers. In each center, the goal was to delight the customers.
- The culture of each was based on guiding principles, or values, which had permeated the organization. Senior managers, front-line and support employees lived the values every day.
- Each recognized the importance of achieving employee satisfaction. The organization's leaders understood the connection between high levels of employee satisfaction and high quality performance. A distinct appreciation and respect for the front-line team were apparent in each.
- Each committed the resources necessary to meet its customer service standards. This involved a significant investment in hiring, training, and empowering the right employees. It also meant that each provided expert systems and enabling technology.
- In each, we noted open communication between senior managers and front-line employees.
- Each placed importance on knowing what their customers thought. Most surveyed customers routinely as part of their customer-centric environment. Most also solicited feedback from the front-line staff regarding their ideas to improve service.

SIGNIFICANCE OF RESEARCH FINDINGS

In today's fiercely competitive market, service is often the only way to differentiate between your product and your competitor's. The ability of your call center staff to meet and surpass customer expectations is likely the primary determiner of your organization's long-term viability. Using the identified best practices for quality monitoring and coaching is a good start down the right path.

However, for us, the most surprising result of this study, and one we will go into in greater depth later, was the number of call centers that were not able to demonstrate a clear link between their monitoring processes and their agents' performance improvement. And this leads to what is arguably this study's greatest value: the vision of a new model that will result in a stronger correlation between your quality monitoring and coaching process and your agents' ability to establish and/or maintain loyal customer relationships. The bottom line result of strengthening this correlation cannot be overstated.

CORPORATE STRATEGY IMPACT

It goes without saying, or at least it should, that world-class distinction cannot happen without the commitment and support from senior leadership. In order for a call center to deliver exceptional customer service, leaders must first define quality and then communicate quality expectations.

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We define quality calls as those that meet the following criteria:

- Calling experience delights the customer
- Answers given by the agent are accurate
- The call is handled as efficiently as possible
- Company policy is adhered to as closely as possible

If we can agree upon the definition of a quality call, it is of utmost importance that the corporate strategy includes the following:

- The call center is given sufficient budget to hire and retain the best agents.
- The agents are enabled with the best technology to ensure efficient and effective call handling.
- Company policies are customer-centric.

COMMUNICATING A CORPORATE STRATEGY OF QUALITY

Effectively communicating a corporate strategy of "quality is job one" is OVERWHELMINGLY important in delivering a quality experience to customers. Following are some observations we made during this study:

- The CXO level executives can clearly articulate the quality message.
- The CXO level executives frequently articulate the quality message when meeting with employees and stakeholders.
- There is a Chief Customer Officer, and this person's office is in close proximity to the CEO's office, indicating a position of power and importance.
- The corporate mission statement includes the word *quality*.
- Key performance indicators include quality metrics.
- There are clearly articulated quality goals in each department including the call center.
- Quality work gets rewarded.
- A true belief that quality pays for itself permeates the organization.
- Adequate time is allowed for quality monitoring and coaching. (See pie chart below to understand why the job does not always get done.) The pie chart reveals the results of a survey of BenchmarkPortal community members responded to. It answers the question "What problems have you encountered in implementing a quality monitoring and coaching program at your center?"



PURPOSE OF QUALITY MONITORING

On a practical level, most call centers typically conduct quality monitoring to measure agent performance and/or for agent development reasons.

Recommended Best Practices

In terms of quality monitoring, we noted the following differences at the world-class call centers:

- The monitoring and coaching function was properly staffed. It was not regarded as an "as available" basis.
- Most agents in these centers looked forward to being monitored and coached because there was positive reinforcement for modifying their behavior to better serve the customer.
- The agents frequently took an active role in discovering what they could have done better and skill deficits were looked upon as training opportunities. Specific training modules were available for almost every skill deficit discovered. The agent's mindset in these call centers was *this makes me a better agent*.
CALL MONITORING AND RECORDING OPTIONS

Once companies are clear about the purpose of quality call monitoring in their organizations, the next decision becomes: How will we gather the information?

Recommended Best Practices

A combination of call recording, and side-by-side monitoring provides the foundation for a successful quality-monitoring program. Each method provides unique benefits that, when coordinated effectively, enable supervisors to give agents well-rounded feedback.

The recommended best practice is to record ALL calls, including voices and screens. Then intentionally select from this rich and extensive database those calls that have the highest potential for agent learning through coaching opportunities. This approach usually precludes a random selection, as many calls do not have coaching opportunities.

The most productive approach to call selection in the world-class companies was to program their software system to select only those calls that had some kind of noteworthy aberration, such as the following:

- The agent talk time was double the average agent's talk time.
- The number of transfers exceeded two.
- The dead air time was over one minute in length.
- The volume of caller and agent voices was such that it indicated disagreement, even anger.

Output of the Monitoring Phase

The call centers we observed in this study utilized the output of the monitoring phase in a variety of ways, including

- *A Scoring Data Sheet.* The typical output of a monitoring session is a simple scoring data sheet. Predetermined characteristics of the call are weighted, observed, rated, and scored.
- *Specific List of Skill Deficiencies*. A slight addition to the basic score sheet includes a listing of skill deficits that need correcting. A further improvement to just listing the skill deficits is to include specific training recommendations for each skill deficit.
- *Tracked Coaching Tips*. Some centers also track the areas coached so that future evaluations can look for specific behavior changes based on the prior coaching.

Recommended Best Practices

Providing a printed sheet with feedback on each category works best. Less is better, but specific is good.

75

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Be careful not to overwhelm the agent with too much information. Information overload causes the agent to shut down; this is exactly what you don't want to happen.

Also, some companies become so focused on rating the call on a micro level (i.e., did the agent say the script without missing a word? Did the agent misspell anything in her internal documentation?) that they miss the bigger picture, namely: *What did the customer think*? World-class call centers kept this key metric as their primary focus.

WHICH CALLS SHOULD BE MONITORED

Assuming that your company is on board with our recommendation to record all calls, the next decision becomes: Which calls should we monitor and choose for coaching purposes?

Random Selection of Calls

Currently, the most common corporate response to this question is to select calls at random in the hopes of finding calls worth monitoring. Based on our research, this approach is woefully inadequate. The randomness of this method does not provide an accurate reflection of whether or not your agent is consistently delighting your customers. Nor is this approach intentional enough to result in identifying significant coaching opportunities. This approach does not result in a statistically valid measure of the agent's ability or lack thereof.

Calls Selected by the Agent

Getting agents involved in choosing which calls to monitor is an option. Assuming you have a recording system in place, it is relatively easy for the agent to locate calls that definitely delighted the customer. It is as easy for the agent to locate those calls that did not result in customer delight. Listening to calls at both ends of the spectrum provides agents with a fairly representative picture of their skills, as well as their needs for improvement.

Calls Driven by Caller Satisfaction Feedback

Another approach is to start with any caller satisfaction survey information received, assuming the surveys are collected within 24 hours of the call. The call evaluation can be done on those calls and the front-line agent can learn from the actual customer response to the service provided.

The new emerging model promotes starting with direct customer feedback and having the front-line agent's performance rating be determined by the customers themselves.

This eliminates the formal internal evaluation that tries to assess the value the customer would have assigned to the contact because now the customer provides that feedback directly. In the new model, the QA quality monitoring function can be reduced to a sample audit to determine whether internal procedures are being following for those front-line agents that do not receive a significant volume of dissatisfied surveys, which would be audited at the same time they are reviewed. **Note:** It is critical that each survey received as a 'dissatisfied' is reviewed to assess whether or not the reason for dissatisfaction was within the front-line agent's control. For situations such as policy or system-related issues, the front-line agent should be 'held harmless.'

Calls Driven by Call Handling Characteristics

In our study, we found that the best call monitoring systems provided exception reporting to identify potential problem areas. The system can be programmed to identify any performance metric that is outside the norm and/or unacceptable. Potential problems identified included:

- Repeat contacts by customers. The system can identify how many times the customer has called in the last 30 days. The assumption is the more often a customer has to call in, the more hassled he or she is.
- Hold times. The system can highlight when the caller is put on hold, the length of each hold time, and the total hold time per call. A supervisor may choose to review interactions where the customer was put on hold three or more times. The supervisor recognizes the high probability that the front-line agent has a knowledge gap or needs some help in knowing how to effectively handle that particular call-type.
- Voice Variance. The system can flag calls where voices escalate and/or talk over one another.

Calls Driven by Application

The system can be programmed to look for any performance metric that is out of line. This includes metrics like talk time, after call work time, hold time, transfers, or extended dead air time.

Recommended Best Practices

Cases Selected Based on Coaching Opportunity: In the traditional setting, when front-line agent development is the focus, the best practice is to select 'outlier' calls, where there is a higher likelihood for coaching opportunities, for example, reviewing contacts where the customer was put on hold three or more times. There is a high probability that the front-line agent has a knowledge gap or needs some help in knowing how to effectively handle that particular call-type. This approach only works when the front-line agent's performance evaluation is based on customer satisfaction and not on contact evaluation scores.

77

Customer-Driven Quality Monitoring: In the emerging model, the customer determines the rating of the service experience. The quality assurance team is redeployed as a Trigger Team, who coach front-line agents on cases when the customer has expressed their dissatisfaction with the service provided (see graphic below).



WHAT IS MEASURED DURING MONITORING

Telephone Techniques and Etiquette

This is the most common area for quality monitoring and can be done by individuals not steeped in product details. In this area, the person reviewing the call is placing him/herself in the role of the customer and assessing the effectiveness of the service provided. Although direct customer feedback is most ideal, when the customer is not providing the direct feedback on effectiveness, anyone with good service judgment skill can provide this type of evaluation.

Product Knowledge

Most companies continue to view *accuracy of the answer provided* as the most essential purpose of quality monitoring. Often the bulk of the final score of the call is based on this need for accuracy. While no one would diminish the essentialness of accurate answers, we believe this should be only part of the final evaluation. The customer experience is also essential.

System Efficiency/Screen Navigation

This is a relatively new area. Now that screen navigation can be recorded along with the voice component, the person monitoring the call can determine the effectiveness of the Copyright© 2009 BenchmarkPortal LLC 78

agent's skill in navigating the system to resolve inquiries. To deliver a quality call in an efficient period of time, screen navigation skills are essential. Monitoring this area can result in a wealth of opportunities to coach on short cuts and efficiency skills.

Company Policies and Procedures

Companies naturally have policies that agents are taught and that must be followed. Quality monitoring is a perfect time to see if these policies are adhered to during the call. These policies could be related to warranty limitations, risk management issues, and complaint documentation.

Potential Fraud Issues

Order taking call centers can be vulnerable to fraud related issues. An example is when an agent is pressured to make certain sales goals. The agent signs up a customer for a special when, in fact, the caller explicitly declined the up-sell. The phone companies even have a word for this practice, namely "cramming."

Recommended Best Practices

This is where there emerges a divergence of philosophy. There are two schools of thought. The best traditional thinking is that the criteria for success in call evaluations focuses on how effectively front-line agents resolve customer issues, on how well agents demonstrate professionalism, courtesy and respect for the customer during the call. The potential flaw with this model is that it is still based on an internal view of what someone else "thinks" the customer values.

The new emerging model is when the *customer* actually provides the service assessment of the call. Through surveys, the customer can provide feedback specifically to the agent about what aspects he/she liked or didn't like. The aspects to measure are the attributes that have a direct correlation to the overall satisfaction of the customer.

For the traditional approach, using internally developed criteria, there are several categories that represented the approach most used by those in our study:

- **Telephone etiquette** including opening and closing the call, tone, courtesy and language
- *Customer interaction and relationship building* including acknowledgement skills, active listening, articulation skills
- *Knowledge and information* including knowledge of product/company, accurate resolution of issue, collects necessary customer information, effective use of resources
- *Efficiency* manages the call; solid judgment
- **Accuracy** all important criteria is that the answers must be accurate

In the new model, the internal evaluation process incorporates reviewing "failed" service experiences, per the customer (i.e., dissatisfied survey responses) and providing direct coaching to the specific situation.

In the new model, the criterion depends on the reason for the initial contact. For example, if the customer contacted a company about a registration issue, the customer might be asked to evaluate whether the agent seemed sincere in his/her desire to resolve the issue. Another question might be whether or not the issue was resolved with the information provided.

FREQUENCY OF AGENT MONITORING

In our research, we discovered that most call centers typically made it their goal to monitor five calls per agent per month. If we can assume that the average agent handled 1000+ calls per month, we find that this metric is not quantitatively valid. Even if these organizations monitored double the typical goal of five, their efforts would only result in a 5% confidence level. This means that the probability of choosing a fair representation of calls is only 1 in 20.

Using the 1000+ calls per agent per month assumption just mentioned, call centers would have to monitor 350 calls per agent every month to reach a 95% confidence level! We have yet to benchmark a call center that can devote the time and resources required to ensure this kind of statistical reliability.

(It bears mentioning that in one of our surveys, we asked call center supervisors to identify their greatest challenges in call monitoring. By far, the greatest challenge identified was *lack of time*.)

Our acknowledgement of the improbability of monitoring 350 calls per agent per month is at the heart of what drove us to find the best practice in this arena. We knew that there was a better way to ensure that quality monitoring was more strongly correlated to increasingly higher levels of customer satisfaction. That better way is the new model that we'll speak to further in the report. It does not require 350 monitored calls per agent per month, but instead relies on an intentional focus to align priority metrics with the customer's perception of his or her service experience and a redeployment of supervisors.

The issue of monitoring frequency must take into account not only those agents who are fully functioning but those new hires and exceptions, too.

During First Month Following Release from Class

This is a critical period for a new agent. The best practice is to move the agent from the formal classroom setting to a transitionary "hub" environment. The entire class moves together, and new agents are provided extensive support and coaching during this period. By helping each new agent become confident and competent in their new role, their productivity and quality scores increase quickly. This method shortens the learning curve

significantly and helps ensure agent retention during the most stressful stage of their call center career.

During First Six Month of Employment

The new agent still needs more direct attention from their direct supervisor than those who are fully functioning. This is a period when habits form and most agents are very motivated to make a good impression. Mold them with frequent monitoring and coaching while they are still not set in their ways.

After First Six Month of Employment

While all agents should have periodical audits of their work, the highest performing agents can be monitored and coached less if they have proven that they are consistently effective. It's also important to note the particular preferences of each agent. If an agent really thrives on regular positive feedback, then continue to monitor and coach as usual. For those that appreciate being recognized for needing less coaching, then a reduced monitoring schedule works well for them.

When Put On Probation

How frequently an organization monitors those on probation depends on the reason for probation. Most world-class companies have developed zero tolerance policies. So, in cases of blatant disservice (i.e., intentionally disconnecting or arguing with a customer), the agent is likely to be formally terminated without a performance plan. If there is no willful intent to provide poor service, then dedicating some additional time and attention may be time well spent.

Agent behavior needs to be monitored closely to either reinforce movement in the right direction or to redirect at first sign of wrong behavior.

Recommended Best Practices

The recommend best practices regarding monitoring frequency in the categories discussed above are as follows:

- **During the first month following completion of initial training.** The best practice during this period was to monitor and coach the new agent at least two calls per day while in the "safe hub" environment.
- During the first six months following release from the safe hub environment. The best practice during this period was to monitor and coach the agent at least at least two calls per week.
- <u>After approximately the first seven months of employment, or when the</u> <u>agent has reached "solo" status</u>. The best practice for an experienced agent is to monitor and coach as needed, i.e., to make the experience more customized to each agent's needs. During this period monitoring and coaching may be by exception only, or as dictated by caller dissatisfaction feedback, or unusual

performance metrics, for instance long average handle times, above average "dead air" time during the phone call, and the like.

• <u>Should the agent be placed on probation for any reason</u>? If an agent is on probation, the best practice is to monitor and coach the agent at least three times per week. These sessions need to be documented in greater detail than normal agent interactions.

WHO DOES THE MONITORING

There are several models developed around who actually performs the quality assessments. This section addresses these models and points out which ones are most conducive to exceptional call quality monitoring and coaching.

A Dedicated Quality Team

One of the most popular models is a dedicated team whose primary responsibility is to monitor 5 -10 contacts for each front-line agent each month. The purpose of the observations is to identify skill gaps. The team provides constructive suggestions to improve the service levels. The majority of those operating in this model use evaluation criteria that attempts to assess the service experience from the assessors' perspective. Evaluations may or may not be tied to the performance assessment process.

The Direct Supervisor

Another most common model assigns front-line supervisor responsibility for monitoring some or all of the agent calls. This was especially true when most supervisors were selected from the agent ranks and had call handling experience in the center.

Peer Monitoring

A third approach, not as common as the prior two, is where a team of product experts monitors lesser-experienced agents.

A Third-party Outsourced Company

Another alternative is to outsource the monitoring process. Companies now exist that will accept the recorded voices and do the monitoring and scoring process. The end product is a scoring sheet on every call and some recommendations to the coach of corrective action to suggest to the agent.

Recommended Best Practices

A combination approach works best. Having a dedicated quality team provides the framework to ensure that the evaluations are performed each month. The coaching, however, should be done by the direct supervisor. The supervisor needs to be dedicated to team development rather than outside activities. The supervisor also needs to be credible by having current knowledge about the position and the subjects handled.

WHO SHOULD DO THE COACHING

A major problem encountered during our study was that supervisors simply did not have the time to coach based on monitored results. In fact, in a study fielded to all of our community members, we found the time crunch to be a key obstacle.

A Team of Coaching Experts

Often in a center handling very complex calls, only real experts can truly evaluate the level of the agent's understanding of the question or issue. In such a situation, it may be mandatory that product specialists be assigned to monitoring.

The Direct Supervisor

The direct supervisor is the most common and most logical agent coach.

A Third-party Outsourced Company

Because of the tremendous time burden of coaching, often there is simply not enough time in the day to do this activity completely by the internal staff. A number of thirdparty outsourcing companies have sprung up to assist. When properly trained, they can do a very professional job.

Recommended Best Practices

Front-line management should be dedicated to agent development. The role of front-line supervisors is to develop the talents of their teams. They own the performance of their team, including the satisfaction level of the callers that they serve. We observed that majority of world class supervisors spent their time in:

- side-by-side coaching with the front-line team members
- reinforcing right behaviors and coaching others
- removing obstructions to providing world class service
- communicating performance results/trends
- co-developing development plans with front-line team members
- sharing and learning best practices with co-leadership
- sharing best practices within the team
- creating/maintaining positive environment team building
- handling irate situations, modeling approach for learning

More than 90% of the supervisor time should be spent with and among the

team. World-class companies recognize that they have the most pivotal role in determining the success and performance level of the front-line team. They are not pulled away for project work or corporate initiatives.

Ratio of supervisors to front-line agents is important. The front-line supervisor has 13-15 team members as direct reports. There is a commitment to keep the ratio within this range. Newer front-line supervisors may have fewer as they learn how to be an effective people-developer.

Supervisors hired for leadership skills. Rather than promoting the best technical employee, world-class companies understand that, while content knowledge is important, that knowledge can be trained. It is more important to ensure the right person is in this role than any other role in the contact center. Ideal is hiring agents who have shown, through aptitude testing and prior history, that they have the ability to excel as a leader.

Training for supervisor role. World-class companies invest in their leaders. Because the success of the center is based on the performance of the front-line team, and the frontline leaders are responsible for developing their team, they need to be well trained for the position. They are trained in the leadership philosophy of the organization; in best practices in motivating and sharing feedback; in team building and on how to read and interpret the reporting for their team and the center. They are also involved in ongoing training to continually improve their leadership effectiveness.

Note: It is important that no matter who does the coaching, that the coach understands the essentialness of agent "self-discovery." It is critical that the coach doesn't force feed the agent his or her evaluations but guides the agent to self-discovery through strategically asked questions.

STAFFING

This section addresses the staffing of the call quality monitoring process.

Ratio of QA Team to Agents

In the traditional model, if the technology is effective in capturing contact information, the ratio is one Quality Analyst for every (70) front-line agents. If the process is more manual, then the ratio is one Quality Analyst for every (35) front-line agents. At this ratio, the QA Team can consistently deliver five to ten evaluations per front-line agent per month, depending on the criteria and complexity of the contacts.

Ratio of Coaches to Number of Agents

In the traditional model, the ratio is one coach for every 75 front-line agents. If the process is more manual, then the ratio is one coach for every 50 front-line agents. At this ratio, the quality coaching team can consistently deliver five to ten evaluations per front-line agent per month, depending on the criteria and complexity of the contacts.

Recommended Best Practices

The recommended best practices for staffing are as follows:

• Supervisor to agent ratio equals 1 to 15, which includes time for coaching at least one session per month per agent.

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- Monitor to agent ratio equals 1 to 50 for automated recording systems, and 1 to 35 for manual systems.
- **Coach to agent** ratio equals 1 to 75, which allows each agent to be coached for up to 10 sessions per month.

BUILDING IN CONSISTENCY IN THE EVALUATION PROCESS

Calibrations

When there are multiple monitors either at one site or at multiple sites, it's important to make sure there is consistency in the scoring technique. Typically this can be taken care of by periodically having all monitors score the same call, and then discuss only those scores that show a wide variance.

Agent Appeals

To get complete agent buy-in, it is critical that agents have the ability to appeal evaluation scores. Appeals can have many forms, but one of the typical forms is simply to ask that a different person score the call under appeal. Some centers pattern their appeals process after the legal system; namely, every appeal is reviewed by three people to ensure a maximally fair result.

Multiple Call Center Sites

There are a couple of approaches to multiple sites. One is to have monitoring done centrally. The same team, regardless of agent location, does all of the evaluations. The primary benefit is consistency and communication within the team

Another approach is to have one designated point person at each of the locations. That contact point is responsible for ensuring that there is consistency within their location. A critical practice is to routinely calibrate within locations. The primary benefit of location-specific monitoring is the relationship/partnership between the monitoring team and the front-line leadership and agents.

Recommended Best Practices

Calibrations are a best practice. So are agent appeals. For multiple sites, the benefits of having the monitoring team on site outweigh the benefits on having all evaluations done by a centralized team. Also, in most world class companies, the quality team and training team are either a combined team or are "joined at the hip," which further reinforces the need to be on-site.

SHARING MONITORING RESULTS WITH THE AGENT

We discovered a variety of ways that the monitoring results were shared with the individual agent.

85

By E-mail

One method was to have the supervisor's score sheet sent to the agent by e-mail. The agent is then taught to do a level of self-coaching by reviewing the feedback and, in some cases, respond with planned actions to improve performance. This is not ideal.

By Personal Feedback Coach

A feedback coach meets with each agent and reviews the results. They then share the evaluations with the agent's direct supervisor.

By the Direct Supervisor

The direct supervisor reviews the monitoring results. The supervisor is also responsible for the performance of the team and the behaviors of each front-line agent. The supervisor, therefore, is essential in facilitating the learning of each front-line agent in the areas needed.

Recommended Best Practices

- Who conducts the feedback can be key. Our study revealed two models:
 - The monitor who conducted the evaluation provided the feedback for those calls scored.
 - The monitor forwards the feedback to the direct supervisor, who reviews it with the front-line agent.

If the other aspects are present, (i.e. supportive environment, those giving feedback are well trained, metrics focused on customer satisfaction, etc.) either model works. But no matter which option works for your call center, ensure your supervisors monitor and provide feedback to each agent at least one per month to stay involved.

- **Build an environment of trust to open the possibilities for change**. Frontline agents feel supported and encouraged in world-class companies. Everyone from senior leadership to the classroom trainers is dedicated to the agent's success.
- Include agent self-assessment of calls as a normal part of the agent development process. Having agents actually listen to the calls and score themselves on their performance is one of the most powerful behavior improvement techniques available. Agents can "hear" their weaknesses when they listen to the call, especially if trained to do so by professional coaching.
- **Remember that self-discovery is key**. World-class companies know that no one changes until they decide to change. This is a key differentiator between world-class companies and those that are not yet world class. World-class leaders know how to share the feedback. Whether the feedback is from the customer directly or from the quality internal evaluation, the supervisor will ask questions that lead the agent to self-discovery.

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• **Keep in mind that words do matter**. The actual <u>words</u> chosen for coaching have a significant impact on whether or not the agent 'hears' the message. Unless a person agrees that a behavior needs to be changed, the most that will happen is forced compliance. One world class company specifically opens the feedback sessions with the question:

"After listening to the call, would there be anything you would change?" Rather than ask "what would you change" which implies that there was something that needed to be changed, the words chosen make "nothing" a viable answer. An old adage may apply here: *A man forced to change opinion under will is of the same opinion still.*

- **Personalizing the message is best**. Since much of behavior modification is driven from an agent's decision to make a change, the direct supervisor needs to know each front-line agent individually. Each agent is wired differently. And the better the supervisor understands an agent's values and what motivates him or her, the better that supervisor's chance is to influence and impact the agent's performance. In the same way that agents are trained to adjust their style to meet each customer's needs, the supervisor must adjust his/her leadership style to meet each agent's professional needs.
- **Timing is definitely critical.** Results from customer surveys should be reviewed with the front-line agent within 24 hours of the call. Feedback beyond that point loses impact and credibility.
- **Tracking areas for improvement is essential**. A best practice is to track the areas that the front-line agent is focused on improving and look for improvement in those specific areas on the next evaluations. Changing behavior is not easy. Reinforcing the right behaviors by recognizing improved results increases the chance for continued agent success.

KEY PERFORMANCE INDICATORS

The following addresses the key performance indicators that should be used in the call quality monitoring process.

Agent Expectations Tied to Customer Satisfiers

Performance expectations for agents and supervisors should reflect a commitment to delighting the customer. Expectations are tied to key customer satisfiers and clearly communicate the extent to which agents are empowered to serve customers. Mixed messages are avoided (e.g., Agents are told to take the time needed to satisfy callers and, hence, should not be directly evaluated on the average length of the calls they handle).

87



Connecting Internal Metrics to External Measurements

Overall Center Metrics Focused on Customer

Predicting quantitative and qualitative measures for achieving customer satisfaction is a necessary place to start. However, actual customer satisfaction rates, as indicated by the customer, are the central focus. Productivity and efficiency measures are focused on effective use of staff, technology, and employee satisfaction. (Most world-class call centers recognize that employee satisfaction is a primary predictor of productivity and efficiency.) Measures are continuously compared to industry data, including industry average, best competitor, and appropriate benchmarks.

Management Information

Front-line managers review statistics on calls, such as numbers of calls, ASA, service level, call lengths, after call work time, and other measures for their group or individual front-line team members. These are used to help improve overall performance and staffing levels, not to criticize the agents. Managers review exception reports for individual-based metrics, such as talk time, average hold time, and after call work as indicators of possible problems areas for coaching.



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Recommended Best Practices

Criteria:

World Class companies evaluate contacts based on direct indicators that drive customer satisfaction. By analyzing the results from their customers, they determine what internal metrics are representative of the customers' perception of the service experience.

In the evolving model, the customer determines the criteria to assess the service level. Starting with universal service metrics, such as resolved on 1st contact and easy accessibility, World Class companies ask their customers to determine how well the frontline agent performed. Based on the suggestions to improve the service experience, World Class companies evolve the questions to provide actionable feedback on what the customer deems most important. The role of the internal review then changes to an auditing role.

• Key Performance Indicators for Quality of Calls Handled

- % Top box score on overall customer satisfaction (rated 5-out-of-5 or 10-out-of-10 by the customer)
- o % Resolved on first contact (as rated by the customer)
- o % of accuracy audits that pass
- Key Performance Indicators for Quantity of Calls Handled
 - o Adherence to schedule
 - Occupancy or Utilization
- Other Performance Indicators to Monitor include (indicator types, not absolute list):
 - o Abandon rate
 - Average speed of answer (ASA)
 - o Average talk time
 - Average after call work time
 - Percent of calls transferred

COMPENSATION IMPACT

Pay for Performance

Monitoring systems are often tied to performance pay. Using a traditional model, there is not enough sample size to statistically support using the numbers for performance assessments.

Reward and Recognition

It is quite common to tie rewards and recognition to monitoring systems. There are many effective versions of tying reward and recognition to the 'right behaviors.' The most

effective methods allow for customization of the rewards to each agent's personal preferences.

Recommended Best Practices

World-class call centers typically combine both practices. When tying pay to performance, it is essential that agents receive short-term incentives, such as monthly goals tied to pay outs based on their ability to delight the customer. Compensation programs that pay agents strictly based on longevity or for their acquisition of a specific skill set have their limitations. The caution with both is that they fail to recognize that an organization may end up paying money for a complacent veteran and/or for a skilled, but unmotivated.

THE EMERGING MODEL FOR QUALITY MONITORING AND COACHING

As stated early on in this report, following the best practices described here is a great start down the path of differentiating yourself from your competitor. However, findings from our study also helped us shape an emerging model for quality monitoring and coaching. We are excited to share this information with you.

This new model addresses many of the pitfalls addressed previously. Some of those include: there's not enough data to statistically measure an agent's performance; there's not enough time to perform quality monitoring; and the people doing the monitoring must try to evaluate the level of customer satisfaction. How do you know what really makes your customers happy?

The emerging model for quality monitoring acknowledges that, to be effective, we must recognize that customer service is both an art and a science. As such, it must be measured this way. The "artsy" measurement of the *service experience* acknowledges the essentialness of capturing the customers' perception of their service experience. As we've discussed, today, most organizations try to measure agent performance based on what some level of leadership imagines to be the customers' expectations. The potential flaw with this model is that the criterion is based on an internal view of what someone else thinks the customer values. Obviously, no one is better suited to give this kind of feedback than each individual customer. This truth acknowledges that one customer's definition of delightful service is quite likely different than the next one's.

The "scientific" measurement considers the **accuracy of the audit.** Was the correct answer given? Were the "red rules," those that can never be broken for legal or company reasons, followed? Did the agent display good judgment in some "blue rule" areas? Blue rules are those rules that are established for legitimate reasons but can be bent depending on the situation. Surely, the accuracy of the audit will continue in its importance. Agents may delight their customers but give inaccurate answers to the customers' questions. This is not good service.

Both sides of this model are necessary to building customer loyalty. We are convinced that, while the measurement of audit accuracy will continue in its importance, the trend

towards incorporating the customers' voice as the primary half of quality monitoring will gain increasing momentum.

In the emerging model, we actually let the customer assess the call and rate his or her own satisfaction with the agent. Through surveys, the customer can provide specific feedback regarding what aspects he/she likes or doesn't like. The aspects to measure are the attributes that have a direct correlation to the overall satisfaction of the customer. The customer feedback also helps determine which calls will be monitored.



In the new model, the internal evaluation process incorporates reviewing "failed" service experiences as identified by dissatisfied survey responses. Direct and tailored coaching is then provided to help the agent avoid this issue in the future.

This model uses the customer's view of the **service experience** as the priority focus of the agent's coaching. The secondary focus is the **accuracy audit**, the evaluation of the agent's performance against internal company standards. This approach enables the agent to learn how the customer perceived his or her service, as well as how he or she meets internal quality goals. More importantly, it switches the primary focus from compliance to a mindset of "how can I delight the customer?"

Depending on the customer, delighting the customer may require that the agent be able to establish rapport, build loyalty, or manage the customer's perceptions. The point is to move away from a cookie cutter approach to service excellence and towards the recognition that each customer's needs are unique. The best agents can adapt their behavior to meet the needs of his or her customers. We see this approach as being not only a best practice, but we endorse it as the central focus of our new vision for quality monitoring and coaching. We cannot emphasize enough the value of utilizing actual customer feedback. This approach eliminates the leaders' need to imagine how the customer would have valued his or her interaction. The internal guess work is unnecessary because now the customer provides that feedback directly (and, of course, more accurately). The agent is now evaluated based on the degree to which he or she is able to delight the customer.

This approach is also more cost effective than many other methods of quality monitoring. Instead of using internal resources such as a monitor or supervisor to evaluate countless service experiences, you've put the customers to work as evaluators! So your evaluation results will not only be more accurate, they'll also cost you far less as your customers will evaluate their experience for free.

CHAPTER 7:

CALL CENTER CERTIFICATION



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Call Center Assessments

Customer contact centers, commonly referred to, as "call centers," have become the focal point of technological advancements aimed at interfacing businesses with their customers. Maintaining service levels, quality customer service, and obtaining appreciative levels of customer satisfaction has become a science that makes an art of call center management. Call center management in itself, is the delicate balance of many tasks and events: workforce management, obtaining the optimum in service levels and customer satisfaction, agent training and supervision, quality monitoring, coaching, and evaluation, and much, much more. Benchmarking is the best and accepted method for setting realistic and measurable goals, management objectives, and identifying performance initiatives that commit to the least expenditure of resources.

However, the practice of benchmarking should aim at establishing best practices, or those practices that excel in performance according to industry standards and lead toward optimization of the call center. The process of establishing and maintaining best practices for the call center is a continual process. For a call center to perform at its optimum, it requires a plan of action with an accepted methodology that involves the close examination of the key performance indicators that affect its efficiency and effectiveness through a benchmarking assessment of the center. Through this method, (benchmarking assessment) call centers may establish those initiatives that will enable best practices to be achieved, peak levels of customer service attained, and customer satisfaction restored.

It is the goal of BenchmarkPortal to assist call centers in establishing best practices of operations of excellence through our unique benchmarking assessment processes and related services. In doing so, contact centers gain the opportunity of receiving the status of global recognition through certification (as explained in the next section), and the security of an efficient and effective operation. The manager's goal, therefore, is gain that business intelligence required to implement those initiatives that result in a directional shift of the company's performance to optimal and best practices. This business intelligence is best gained through an independent on-site assessment.

Contact center assessments are performed either directly by us, or by an independent consultant who has completed a special training class offered through the Center for Customer-Driven Quality at Purdue University and who has passed the Call Center Certification Auditor Examination.

The Steps in the Assessment Process

The call center assessment process is conducted in three phases as follows:

Phase One - An in-depth performance benchmark audit of your call center is conducted. In this process, we compare your performance to the performance averages of your selected industry. In most cases, the In-Depth RealityCheck[™] survey is used for this. This portion of the benchmark also included an independent study to the

satisfaction of the caller experience to the center, as well as a study of agent satisfaction.



Process Tree depicting the 16 basic call center processes

Phase Two – We conduct a "deep dive" into the major performance gaps that are identified in the Phase One report. This discovery process, performed on site, focuses on those key call center processes (see the figure above) as identified through the benchmarking. The Executive Summary of this phase results in a series of specific recommendations for call center improvement.

Phase Three - We come back annually to benchmark your performance to ensure that you are continuing to operate your call center at or above the quantitative performance level needed to maintain full certification.

The complete audit requires a minimum of two days on-site at your call center. Most call centers managers find tremendous value in having a qualified consultant help them to a) focus on those metrics crucial to their success; b) gather and input data correctly; c) interpret our reports so as to get highest value-added from the benchmarking process. The reports required for the audit and travel expenses are billed separately.

Introduction to Call Center Certification

As the customer service call center has become the most vital interface between a company and its customers, it has become critical that the call handling process be conducted both effectively and efficiently. Many companies now want a "third party" opinion regarding how well their call center is functioning in its strategic role of getting, keeping, and growing customers. This business need to rate the performance of a company's mission-critical call center has led to call center certification.

Call center managers who wish to implement best practices and attain world-class performance in their industry can call upon us to certify their call centers. Our rigorous certification process has the advantage of referencing all performance goals to our best practice database of thousands of call centers. Thus, you will be held to performance levels that will improve your competitive position, not just force you to adhere to an arbitrary standard. This makes our certification process management's best path to a Center of Quality. Our certification program is unique in the world as it sets performance standards according to industry best practices. The statistics are determined through continuous processing of thousands of performance metrics stored in our data warehouse, which is the largest in the world.

Certification is performed directly by special members of our staff who have completed a special training class offered through the Center for Customer-Driven Quality at Purdue University and who has passed the Call Center Certification Auditor Examination.

How the Call Center Certification is Unique

The Center for Customer-Driven Quality at Purdue University, through its business partner BenchmarkPortal, manages a data warehouse of call center best practice statistics on thousands of call centers in 24 industry segments. These performance data are kept current and accurate, and are used by call center professionals worldwide to establish goals for best practice call center performance.

Our call center certification process is unique in the following ways:

- Our certification process is based strictly on a quantitative approach, as compared to a qualitative approach where most performance issues depend largely upon the judgment of a trained auditor.
- Our certification process begins with a thorough statistical comparison between the call center striving to be certified and a "peer group" of similar call centers in the same industry sector.
- Our certification process is based on a "balanced score-card" approach of performance comparison, namely, certified call centers are able to manage call handling at a high level of both efficiency and effectiveness, i.e., at both "high quantity of calls, and high quality for each call."
- Our certification process relies completely on statistical methods of performance benchmarking that pinpoint areas of high performance, and quantify gaps in areas of low performance.
- Our certification process is academically based, and uses only established scientific methods to measure the achievement of certifiable best practices standards.

The Certification Process

Each center wishing to gain certification as a Center of Excellence must:

- Benchmark itself against its industry of registration within the Purdue/ BenchmarkPortal database of best practices;
- Complete an independent caller satisfaction study as provided by BenchmarkPortal and/or supply required supporting caller satisfaction data;
- Complete an independent agent satisfaction study as provided by BenchmarkPortal and/or supply required agent satisfaction data; and
- Provide to BenchmarkPortal all documentation as required to validate the submitted performance data of the center.

Through the combined results of the above steps, should the call center perform better than industry its industry of registration by achieving placement in the upper right-hand quadrant of the Performance Matrix, BenchmarkPortal will award the call center certification as a "Center of Excellence." This certification may also be achieved through an on-site assessment providing all criteria are met. In addition to a personally addressed letter to the President/CEO of the center from Dr. Jon Anton in recognition of this achievement, centers obtaining certification shall receive one plaque and banner as shown below.



Example of the seal as depicted on the banner (top). Example of Certificate of Center of Excellence awarded by The Center for Customer-Driven Quality at Purdue University. Signed by Dr. Jon Anton (bottom).

CHAPTER 8:

BENCHMARKING METHODOLOGY: A CASE STUDY

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103

Introduction

Over the past decade, the call center has moved from a back-office cost center to the front line of the current corporate customer relationship management (also know as "CRM") strategy. In this migration to CRM, the importance of the telephone service representative (often referred to as a "TSR" or "agent") has gone from the need for individuals with minimum skills at minimum pay to the need for the sophisticated "knowledge worker" of the present and future.

In parallel with this evolution, technology has opened several additional channels of communication between customer and companies. The two most popular with customers are e-mail and the corporate Web site. Management of customer relationships through these additional channels has added an "e" to CRM, namely electronic customer relationship management (now called "e-CRM"). With the additional management challenge of these new channels, the call center itself is in a transitory state as it moves more and more to becoming the e-business center of the future.

Now that top executives are convinced that the e-business center is a strategic weapon for: (a) getting customers, (b) keeping customers, and (c) growing profitable customers, the importance of performance benchmarking (defined below) has become mission critical.

This chapter describes, in detail, a case study where benchmarking was able to determine important gaps in call center performance, and then pinpoint areas of improvement in human resource management. The case study focuses on a bank call center handling predominately inbound, customer service calls.

Definition of Case Study Terminology

The following are definitions of terms used in this case study presentation:

An **Inbound Customer Service Call Center** is any group of agents whose inbound calls are routed by an automatic call distributor (also known as an "ACD"). The ACD automatically routes each inbound call to the agent based on one or both of the following routing rules: (a.) the next available agent, and/or (b) the next available agent who has the proper skills and knowledge to best handle the caller's issues.

Human Resource Management (or HR), for the purpose of this case study, shall be that team of professionals in the call center that recruits, screens, trains, and monitors the agents.

Performance Benchmarking is a structured, analytical method of comparing the performance of two or more call centers in order to determine best practice goals and to ensure competitive CRM functionality leading to market dominance.

The **Efficiency Index** is a combination of performance metrics that are related to productivity. Examples would be average talk time, average after call work time, calls per agent per shift, and the like.

The **Effectiveness Index** is a combination of performance metrics that are related to quality. Examples would be caller satisfaction, calls handled on the first call, and the like. More on the calculations of this important index can be found at <<www.BenchmarkPortal.com>.

The **Call Center Performance Index** (TPI**) is a balance scorecard that combines the Effectiveness Index and the Efficiency Index into one combined index of performance.

Best Practices are the acceptable levels of performance that come about by benchmarking the best performers in any particular group. In the benchmarking methodology developed by the author, the peer group call centers are first ranked by TPI**. The best practice metrics for that peer group are determined by averaging the performance metrics of the top 25% of the peer group. To get the best practices for an industry segment, for instance, banks, first rank all bank call centers by TPI**, then select the top 25%, then average their metrics to determine the best practices for the banking industry segment.

e-CRM is best defined by considering three distinctly different customer needs, as follows:

Operational e-CRM is the seamless accessibility through all communication channels (also sometimes referred to as customer "touch-points") by the customer to mission-critical information related to the purchase, use, servicing, and repurchase of a company's products or services.

Analytical e-CRM is the monitoring and analysis of each e-interaction, through any channel or touch-point that a customer has with the company, whether this is by telephone, email, or through a Web site visit.

Collaborative e-CRM is the customization and personalization of all future customer e-interaction based on what was learned from all previous interactions.

A **Peer Group,** for the purposes of this benchmarking case study, shall be any group of call centers that has a similar profile to the call center being benchmarked. Example of profile delimiters are as follows: industry segment (i.e., banking/financial services), inbound versus outbound calls, annual call volumes, number of agents, type of calls handled, and many more.

The **Peer Group Best** as used in reports in this case study is the top 25% of a peer group based on TPI**.

An Actionable Report is a report that makes it very clear what action needs to be taken by the manager using the report. Copyright© 2009 BenchmarkPortal LLC 106 **Agent Occupancy**, or occupancy factor is determined by taking the time that agents are in their seats ready to answer calls as compared to the total number of hours that they are at work. Therefore, if an agent is at their desk and ready to answer phone calls 4 hours out of an 8-hour shift, the agent occupancy rate is 50%.

Agent Adherence to schedule is a measure of whether agents are "on the job" as scheduled. Adherence is determined by comparing scheduled time when an agent is "supposed" to be at work, as compared to the actual time the agent is actually at work. The question, "how often do agents deviate from their schedule" is answered by this metric.

Aptitude Testing includes a range of personality testing products that tend to predict if an agent has the right "genes" to give great customer service. These tests have been validated specifically for the screening of agents. There are also a range of "realistic job preview" simulators that allow agent job applicants to spend time in a simulated call handling environment to see if they have the right combination of attitude and aptitude to do call handling as a long-term job commitment.

Skill-Based Routing of calls is a product offering by the major switch manufacturers that routes calls not only to the next available agent, but more importantly to the next available agent that has the proper skills to handle the caller's issue.

Case Study Specifics

This is a detailed case study of the benchmarking experience of a call center in a company with the following business profile:

Industry Segment:	banking/financial services
Company Size:	\$33 billion in assets
Number of Call Centers in the Company:	22
Number of Call Centers in this Case Study:	1
Number of Agents:	325
Annual Call Volume Handled:	4,524,000
Primary Functions Handled by Agents:	a) customer service b) complaint handling
Distribution of Inbound versus Outbound:	90% inbound 10% outbound follow-up
Peer Group Delimiters:	a) banking/financial servicesb) 200 to 400 Agentsc) 2 to 5 million calls handled

Why and How to Benchmark a Call Center

Performance benchmarking of mission-critical company processes, e.g., accounting, Utilities, shipping, etc., has been around for years. The process is well documented and is a popular way to answer the question "How good is <u>good enough</u>" when it comes to the performance of a department, or process, within an organization. As is clear from the definition, benchmarking is always a structured gap analysis of performance metrics as compared to organizations that have similar characteristics, i.e., it is logical to compare banks with banks, insurance companies with insurance companies, and the like.

By contrast, call center benchmarking is relatively new and was first initiated at Purdue University by the author in 1995 with a grant from IBM. After more than a decade of research, the Purdue/BenchmarkPortal database of almost one terabyte of performance metrics is constantly being enhanced by new participants, and is now outsourced for data management, maintenance, and information distribution to BenchmarkPortal LLC (Web site at <www.BenchmarkPortal.com>).

The primary reasons to benchmark a call center are as follows:

- 1. Comparisons help to reduce the typical barriers to change. For instance, if you know you are 50 pounds overweight as compared to your human peer group, i.e., people with the same age, gender, and ethnicity, it is more likely that you will take some action to lose weight.
- 2. Secondly, you can further magnify performance gaps by calculating the dollar value of poor performance. For instance, it is much less likely that you will get management's attention if you publish a performance gap in average talk time of 1.5 minutes per call. It is much more likely that you will get immediate management attention if you instead show that a performance gap of 1.5 minutes for each call compared to your peer group adds up to over a million dollars of excess cost each year.
- 3. And finally, the main purpose of benchmarking is to help you select the one initiative that commits a minimum of company resources to achieve the best performance goals and objectives. Said in the modern vernacular, benchmarking helps you select the "low hanging fruit."

Call centers that wish to participate in benchmarking their performance can log into the BenchmarkPortal Web site and enter their data, click on the <u>Peer Group Benchmarking</u> link, and then receive the "In Depth RealityCheck[™] Peer Group Report," a complete set of benchmark reports similar to the examples discussed in this case study. This case study is about a real bank in North America that participated in the Purdue/BenchmarkPortal benchmark research, and that has given their permission to use their data without revealing the identity of the bank.

The purpose of the next four sections will be: (a) to show the reports used by the bank's benchmark team, (b) interpret the results as they did, (c) to understand the initiatives Copyright© 2009 BenchmarkPortal LLC 108

selected by the benchmarking team, and finally, (d) to report on the final actual improvements in performance that resulted six months later.

The In-Depth RealityCheck[™] Peer Group Performance Matrix



The first report is called the Peer Group Performance Matrix and is shown below.

The RealityCheck[™] Peer Group Performance Matrix positions call centers in your Peer Group on a 2-by-2 matrix by plotting their efficiency and effectiveness indices. The Efficiency Index integrates those metrics that have an important impact on costs (quantity), while the Effectiveness Index combines metrics that correlate to caller satisfaction (quality). Thus, call centers that are able to optimize customer-centric results, while containing costs, are "Best Practices Call Centers" found in the upper-right quadrant. In summary, call centers rated an "Asset" perform the best, "Liability" the worst.

What is instantly clear from the performance matrix is that the case study bank's call center is performing at the level of a corporate liability while six of its peer group call centers are able to achieve the status of a corporate asset. Two of the peer group call centers are in the efficient but not effective quadrant. It was immediately obvious to the call center benchmarking team that they must drill down to determine what factors may be causing this less-than-acceptable performance.

Though the RealityCheck[™] Peer Group Performance Matrix is not an "actionable report," it is a high-level and accurate "litmus test" of the call center's ability to deliver up to the CRM best practice standards of peer group call centers with the same business challenges. So, the next step was to drill down to find the possible root cause(s) of the low performance.

Figure 34. Peer Group Performance Matrix
The In-Depth RealityCheck™ Balanced Scorecard

The In-Depth RealityCheck[™] Peer Group Performance Matrix reflects a "Balanced Scorecard" of Effectiveness and Efficiency metrics, which are calculated using the Tonchev Performance Index (TPI). These metrics are weighted to yield composite score. A typical sampling of the bank's key metrics used by the TPI to calculate their positioning with respect to their peers on the In-Depth RealityCheck[™] Peer Group Performance Matrix (Figure 50) is shown in the Balanced Scorecard as follows:

Effectiveness Metrics (Y Axis)	Your Value	Industry Average	Efficiency Metrics (X Axis)	Your Value	Industr Averag
Top Box Caller-Satisfaction in Percent	40.00	42.32	Inbound Calls per Agent per Hour	10.50	15.00
Bottom Box Caller-Satisfaction in Percent	7.00	3.36	Calculated Self Service in Percent	87.50	54.78
Гор Box Agent-Satisfaction in Percent	62.00	66.00	Calculated Cost per Call in \$	6.83	4.72
Bottom Box Agent-Satisfaction in Percent	12.00	4.00	Calculated Cost per FTE in \$	145,000.00	52,685.6
Calls Closed on First Call in Percent	65.00	68.41	Average After Call Work in Minutes	2.10	0.98
Average Speed of Answer in Seconds	34.00	33.45	Turnover of Full-Time Agents in Percent	34.00	22.20
Calls Transferred in Percent	7.00	8.00	Average Talk Time in Minutes	3.75	3.22
Average Hold Time in Seconds	25.00	45.00	Agent Utilization in Percent	72.00	89.00
Average Calls Abandoned in Percent	7.00	4.72	Agent Occupancy in Percent	60.00	83.16
30% Calls Handled in xx Seconds	60.00	33.59	Calculated Center Cost per Minute in \$	72.50	56.64
Average Time in Queue in Seconds	NA	27.28	Adherence to Schedule in Percent	72.00	89.08
Calls Blocked in Percent	0.00	1.33	Average Agent Attendance in Percent	75.00	89.08
Calls Opting Out of the IVR in Percent	17.00	54.00	Auxiliary Time in Percent	12.00	6.00
Avg Time Before Abandoning in Seconds	71.00	57.68	Agents/Supervisor Ratio	12.00	10.94

Figure 35. Balanced Scorecard

It is noteworthy to point out that the In-Depth RealityCheck[™] survey is designed to collect fundamental, industry-wide performance contact center metrics used to compare contact centers of similar characteristics (e.g., annual call volume, agent staffing size, human resources, customer satisfaction measurement, operating budget size, call-types handled, etc.). It is intended for inbound customer contact center operations encompassing a wide range of contact center key performance indicators. Contact centers managers will find ample grounds for peer group and best-in-class comparison. The survey includes slightly over 40 questions that cover:

- Classification
- Costs
- Human Resources
- Performance Measurement
- Satisfaction Measurement
- Support Center Strategy

The In-Depth RealityCheck™ Inbound Performance Comparison Report

The next drill-down report is called the Peer Group Comparison Report. A partial listing of this report is shown in the table below, as follows:

Inbound Performance Comparisons					S
Average Time-Based Metrics:	Your	Peer Group	Your	Industry	Your
	Response	Average	Gap	Average	Gap
Average speed of answer in seconds	34.00	24.78	-9.22	33.45	-0.55
Average talk time in minutes (includes hold time)	3.75	3.22	-0.53	4.23	-0.48
Average after call work time in minutes	2.10	0.65	-1.45	0.98	-1.12
Average time in queue in seconds	Left Blank	24.89	N/A	27.28	N/A
Average time before abandoning in seconds	71.00	62.17	-8.83	57.68	-13.32
Average caller hold time in seconds while connected to an agent	25.00	7.50	-17.50	45.00	-20.00
Average Percentage-Based Metrics:					
Average abandoned in percent	7.00%	4.29%	-2.71%	4.72%	-2.28%
Calls resolved on first call in percent	65.00%	77.30%	-12.30%	68.41%	-3.41%
Agent occupancy in percent	60.00%	83.16%	-23.16%	79.22%	-19.22%
Adherence to schedule in percent	72.00%	89.01%	-17.01%	84.18%	-12.18%
Average attendance in percent	75.00%	90.39%	-15.39%	89.08%	-14.08%
Average Auxiliary (Aux) Time in percent	12.00%	5.00%	-7.00%	9.00%	-3.00%
Average Utilization in percent	72.00%	89.00%	-17.00%	89.00%	-17.00%
				© Bench	markPortal, Inc.

Figure 36. Inbound Performance Comparisons

The In-Depth RealityCheck[™] report shows the call center performance metrics descriptions in the first column followed by a column with the actual call center performance metrics of the case study bank (noted as "Your Response"), then the peer group averages along with the performance gaps, followed by the averages and performance gaps for all participants.

For brevity purposes, only fourteen call center performance metrics are shown and these are specifically chosen because they highlight HR management opportunities—the main topic of this case study. It immediately became clear to the benchmarking team that the case study call center is under performing on all the HR-related metrics shown in the table in Figure 52 above.

At this stage of the drill-down research by the benchmarking team, it was already becoming clear which metric might be causing the biggest impact on performance. The most important caller satisfaction driver is the ability of a call center to answers callers' questions on the first call with no transfers and no callbacks. In the above table, this metric is called the "average first/final calls" (also sometimes called "average once and done calls"). In the report above, the case study bank's score is 65% as compared with the peer group of banks at 77.3%. This may appear to be a small difference (only 12.3%), but when the cost of this lack of performance is calculated for this bank, it totals over two million dollars each year, which means it is definitely worth launching an improvement initiative.

The In-Depth RealityCheck™ Performance Ranking Report

The third drill-down report is called the Peer Group Ranking Report. A partial listing of this report is shown below.

Metric	s 🕨	Blocked Calls	Adherence	ASA	ATT	Abandoned	Queue Time	Occupancy
Your Percentil	e 🕨	95.7%	26%	87 %	22%	52.1%	74.0%	18%
	1	.04%	95%	5	2.2	0%	10	91
Poor	2	1.85%	94%	7	3.6	2%	11	88
<u> </u>	3	2.81%	92%	10	3.7	2%	13	86
	4	3.05%	91%	15	4.2	2%	15	85
Group	5	3.17%	90%	22	4.9	3%	16	82
Ran	k 6	4.84%	90%	25	5.1	4%	20	77
Ranking	7	5.80%	89%	31	5.3	5%	32	73
	8	5.82%	88%	31	6.6	6%	36	71
Renort	9	6.45%	86%	50	7.3	7%	39	68
	10	7.78%	82%	60	8.5	7%	42	63
	11	8.44%	77%	68	9.1	9%	45	60
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Figure 37. Peer Group Ranking Report

The In-Depth RealityCheck[™] Performance Ranking Report gives the benchmarking team an even more granular look at how the case study bank compares, metric for metric, with its peer group of banks. For instance, when it comes to blocked calls, the case study bank is actually doing rather well, performing in the 95.7 percentile and ranks second. However, in the very important performance HR management metric of agent Occupancy, the case study bank is only ranked 11th, and only in the 18th percentile.

This report is focused on selecting the one metric that may be causing the most damage to performance, i.e., finding the "lowest hanging fruit" to which you can direct a focused budget for an improvement initiative. Not shown in this table, is the fact that on the metric of "average first/final calls," the case study bank was at the bottom of the heap, i.e., performed the absolute worst. This became the focus of the bank's benchmarking team.

Results and Conclusions

From the previous reports, the case study benchmarking team decided that the biggest negative gap in performance seems to be the average first/final calls, or "once and done calls." It became clear that applicant testing and skill-based routing are high on the list of potential improvement initiatives. In this particular example, the bank's benchmarking team received management's approval to pursue both initiatives. Specifications were prepared, a request-for-proposal (also called "RFP") was issued, vendors were selected, and the initiatives were launched and successfully completed.

Six months after the successful installation and implementation of the two improvement initiatives, the following results were tabulated:

- Percent "first/final calls" improved by 11.6%.
- Average time in queue was reduced by 2.8%.
- Average agent occupancy was improved by just over 6%.
- Calls per agents per shift were increased by 9.4%.
- Caller satisfaction rose by almost 7%.

The bank in this case study spent approximately \$600,000 for the two improvement initiatives, which included the selection process, the cost of the software/hardware products, the training costs of the agents, and the installation services costs from a third-party integrator. When the improved metrics were converted to new revenue, reduced operating cost, and customer satisfaction, the estimated ROI indicated complete payback in less than 16 months of operation.

In conclusion, benchmarking cannot guarantee the success of any improvement initiative. However, this case study does prove that by scientifically selecting initiatives based on "hard facts," not just personal intuition, (sometimes called "gut feel"), management can effectively target improvements that have the maximum impact on the company's bottom-line profits.

References

- 1. Call Center Benchmarking, Dr. Jon Anton and Stijn Spit.
- 2. Benchmarking at its Best for Contact Centers, Bruce Belfiore, with Dr. Jon Anton.
- 3. The Tonchev Performance Index for Call Center Best Practices**, Dr. Jon Anton, Angel Tonchev and Christo Tonchev.
- 4. BenchmarkPortal Web site at <www.BenchmarkPortal.com>.

** The Tonchev Performance Index (a.k.a., TPI) for Call Center Best Practices was used to calculate performance for this case study.

CHAPTER 9:

PRINCIPAL INVESTIGATOR

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Dr. Jon Anton (also known as "Dr. Jon") is an Adjunct Professor at Purdue University and the Director of Benchmark Research at Center for Customer-Driven Quality[™] at Purdue. He specializes in enhancing customer service strategy through inbound call centers, and e-business centers, using the latest in Utilities (voice), and computer (digital) technology. He also focuses on using the Internet for external customer access, as well as Intranets and middleware.

Since 1995, Dr. Jon has been the principal investigator of the Purdue University Call Center Benchmark Research. This data is now collected at the BenchmarkPortal.com Web site, where it is placed into a data warehouse that currently contains over ten million data points on call center performance.

Dr. Jon has assisted over 400 companies in improving their customer service strategy/delivery by the design and implementation of inbound and outbound call centers, as well as in the decision-making process of using teleservices providers for maximizing service levels while minimizing costs per call. In August of 1996, *Call Center Magazine* honored Dr. Jon by selecting him as an Original Pioneer of the emerging call center industry. In October of 2000, Dr. Jon was named to the Call Center Hall of Fame. In January of 2001, Dr. Jon was selected for the industry's "Leaders and Legends" Award by Help Desk 2000. Dr. Jon is also a member of the National Committee for Quality Assurance.

Dr. Jon has guided corporate executives in strategically re-positioning their call centers as robust customer access centers through a combination of benchmarking, reengineering, consolidation, outsourcing, and Web-enablement. The resulting single point of contact for the customer allows business to be conducted anywhere, anytime, and in any form. By better understanding the customer lifetime value, Dr. Jon has developed techniques for calculating the ROI for customer service initiatives.

Dr. Jon has published 117 papers on customer service and call center methods in industry journals. In 1997, one of his papers on self-service was awarded the best article of the year by *Customer Relationship Management Magazine*.

Dr. Jon has published twenty-four professional books:

- 1. Enabling IVR Self-Service with Speech Recognition
- 2. Contact Center Management By The Numbers
- 3. Managing Web-Based Customer Experiences
- 4. From Cost to Profit Center: How Technology Enables the Difference
- 5. Customer Service and the Human Experience: We, the People, Make a Difference
- 6. Customer Service at a Crossroads
- 7. Offshore Outsourcing Opportunities

117

- 8. Optimizing Outbound Calling
- 9. Customer Relationship Management Technology
- 10. Customer Obsession: Your Roadmap to Profitable CRM
- 11. Integrating People with Process and Technology
- 12. Selecting a Teleservices Partner
- 13. How to Conduct a Call Center Performance Audit: A to Z
- 14. 20:20 CRM A Visionary Insight into Unique Customer Contact
- 15. Minimizing Agent Turnover
- 16. e-Business Customer Service
- 17. Customer Relationship Management
- 18. Call Center Performance Enhancement Using Simulation and Modeling
- 19. Call Center Benchmarking: How Good is "Good Enough"
- 20. Listening to the Voice of the Customer
- 21. Contact Center Management by the Numbers
- 22. Customer Relationship Management: Making Hard Decisions with Soft Numbers
- 23. Inbound Customer Contact Center Design
- 24. Computer-Assisted Learning
- 25. Experience Customer Care: "Going Beyond Customer Service"
- 26. Interpreting the Voice of the Customer

Dr. Jon's formal education was in technology, including a Doctorate of Science and a Master of Science from Harvard University, a Master of Science from the University of Connecticut, and a Bachelor of Science from the University of Notre Dame. He also completed a three-summer intensive Executive Education program in Business at the Graduate School of Business at Stanford University.

Dr. Jon can be reached at 765.494.8357, or at <DrJonAnton@BenchmarkPortal.com>.

APPENDIX I - FREQUENTLY ASKED QUESTIONS

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This FAQ contains common questions asked by Contact Center Professionals who have purchased our Industry Reports

Question	Answer
How are your Industry Reports produced?	Benchmark members are constantly providing us data via surveys. When a Call Center Professional participates in our flagship survey, the In-Depth RealityCheck (IDRC), their data is scrubbed, validated, cataloged in their industry, and then housed in our databases. We then take the data and run the averages that appear in the Industry Reports.
What Industries are reported on within an Industry Report?	Each standard Industry Report covers a single Industry. Please refer to our website at <u>www.BenchmarkPortal.com/store</u> and click on Industry Reports at the top for a complete list of the industries offered.
How are the reports structured?	The Industry Report is structured as follows: Chapter 1: Introduction Chapter 2: Partial List Of Participants Chapter 3: List Of Participating Countries In The Benchmark Research (World Wide Reports only) Chapter 4: Industry Highlights Chapter 5: Detailed Benchmark Results Chapter 5: Detailed Benchmark Results Chapter 6: Performance By Industry Chapter 7: Best Practices White Paper Chapter 8: Call Center Certification Chapter 9: Benchmarking Methodology Chapter 10: Principal Investigator Appendix I: FAQ Appendix II: Tonchev Performance Index Appendix II: Products and Services Appendix IV: Glossary Of Terms
What kind of Key Performance Indicators (KPIs) are measured within your Industry Reports?	We report metrics for the following call center areas: general classification (i.e. size, business orientation), call center costs (operational), call center performance measures, caller satisfaction, human resources, process and knowledge (i.e. self-service, contact channels), outsourcing, and call center facilities and design. In total the report tracks 106 individual KPIs. You may download a sample Industry Report at the following Web address: http://www.benchmarkportal.com/ store_files/IndustryReportSAMPLE.zip

Quastian	A
What geographical regions do the Industry Reports cover?	Our standard Industry Reports cover North America only. Our World Wide Industry Reports cover The Americas, Europe/ Middle East/Africa, and Asia Pacific geographical regions.
I'm looking for a report that can breakdown the performance of call centers within specific geographical regions. Do you have any reports that will suit my needs?	Our World Wide Industry Reports cover the Americas, Europe/ Middle East/Africa, and Asia Pacific geographical regions. Chapter 5 of the report depicts the KPI's broken out separately for each geographical region.
How current is the data contained in your Industry Reports?	The data in the report is from a rolling 24 months of completed surveys. The reports are updated every 6 months.
How do I know when the report I have has been published?	The publication date of the report is on the inside title page of the report.
Can I get a list of the call centers that participated in your Industry Report(s)?	Our confidentiality policy prevents us from disclosing the contact information for any one participant who participates in Benchmarking with us. A copy of the confidentiality agreement can be found at the following Web address: www.benchmarkportal.com/cs.pdf
I would like to order an Industry Report, what is the earliest I can get it after placing an order?	Reports that are current (updated within the past 6 months) are shipped within 2 business days ARO. Reports that require updating will be shipped in 5 – 7 business days ARO.
Where can I purchase additional Industry Reports?	Additional reports can be purchased via our Web site at www.BenchmarkPortal.com (then click on Industry Benchmark Reports under the heading Performance Benchmark Reports).
What format does the report come in? Can I get the report in an electronic format (e-copy)?	Typically, our Industry Reports are printed and shipped to you in a hardcopy format. We understand in certain situations you will need this report expedited, therefore we can produce a PDF formatted e-copy of an Industry Report for your order. Please note all Industry Reports, hardcopy and e-copy, are intellectual property and are subject to applicable copyright laws and e-copies of Industry Reports are read- only and may not be reproduced in any form.

Question	Answor
How are the reports shipped?	Typically, Industry Reports are shipped Standard USPS Shipping (for Domestic shipments timing is 2-3 days and 4-6 days for international, barring Customs issues). Expedited shipping is available for domestic and international shipments and is billed under a separate cover at current expedited FedEx rates. Contact <u>Sean@BenchmarkPortal.com</u> if you would like to opt for expedited shipping.
I have recently purchased an Industry Report and would like additional copies for my colleagues. How would I obtain these copies?	Additional copies of Industry Reports may be purchased for \$100 each. To do so, please contact <u>Sean@BenchmarkPortal.com</u>
What if I am looking for a custom cut within an Industry (i.e. call centers in the banking industry that handle a majority customer service questions)? Can an Industry Report be produced that can suit my needs?	We can do custom cuts within certain Industries. Custom Industry Reports take time to produce, so it will take longer to produce, typically 10 – 14 days ARO. Prices of custom reports are quoted on an individual basis.
I have a list of companies I would like Industry data on. Can you produce a custom Industry Report?	For a fee of \$50, we will scan the database to determine the percentage of companies you listed that are included in our database that we could roll-up into a custom Industry Report. However, as per our confidentiality statement we cannot and will not disclose the name of any single company or group of companies included in a specific report. If an order is subsequently placed, the \$50 search fee will be deducted from the purchase price.
In Chapters 4 & 5 of the report, how do you define "Best of Industry"?	The "Best of (XXX) Industry Average" represents the average of the upper quartile (upper 25%) of benchmarking participant responses to the IDRC questionnaire for the "(XXX) Industry".

Question	Answer
In looking at my report I noticed the "Best of Industry" average was lower than the Industry average for a certain metric when it is advantageous to have the "Best of Industry" average for this metric as low as attainable. How is this possible?	This upper quartile is determined by each call center's rating on the TPI Index*. This index measures the center's ability to OPTIMIZE between efficiency (cost metrics) and effectiveness (metrics which correlate with caller satisfaction). In a resource-constrained world, it is more valid, from a managerial point of view, to measure the top performers in this manner. Therefore, it is normal that, in optimizing tradeoffs between efficiency and effectiveness, there will be instances where upper quartile performers will function LESS WELL on specific metrics than the overall industry average for a specific question or metric. (This in itself can be instructive). *see more on the Tonchev Performance Index or TPI in Appendix II.

APPENDIX II - TONCHEV PERFORMANCE INDEX

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I. Introduction

Indexes have been widely used to measure the market performance of companies active in diverse industry sectors. However, as the business processes become more complex and inter-dependent there is an emerging need for a structural analytical methodology that thoroughly examines all the aspects of the company's performance. In response to this challenge, the Tonchev Performance Index (TPI) was developed to match the performance requirements of the Call Center Industry. The index's objectives, structure, calculation and characteristics are briefly described in this paper to facilitate its understanding and utilization.

II. Objectives

The Tonchev Performance Index (TPI) has the following six objectives:

<u>1. Business Performance Measurement:</u> to quickly and quantitatively describe a company's call center as compared with its industry peers.

<u>2. Effectiveness and Efficiency Balance</u>: to take into consideration the balance needed between effectiveness (quality) and efficiency (productivity).

<u>3. Industry and Operations Sensitivity:</u> to evaluate the call center's performance based on both industry and business criteria.

<u>4. Mathematical Normalization</u>: to normalize all key performance indicators so that metrics are expressed in identical and comparative units.

5. Simplified Calculation: to be easily comprehended, calculated and believed

6. Adjustment Allowances: to allow adjustments and updates without major re-design.

III. Index Structure

Considering the above-mentioned objectives, the TPI index has a multi-level division of its composite metrics. The first division is by types of call centers. Here, there are three possibilities: inbound, outbound, and both. For each of these three categories, there is a further split into equal amounts of effectiveness and efficiency key performance indicators. The idea behind this separation is to achieve a balanced model that realistically measures a call centers' performance. Finally, the last metrical division is by industry types. (Please, see the two figures below.)



A Balanced Model (example)



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128

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IV. Index Calculation

The main TPI index's formula is:

$$\mathsf{TBPI} = (\mathsf{Q} + \mathsf{P}) - \frac{|\mathsf{Q} - \mathsf{P}|}{\mathsf{k}}$$

Q = Effectiveness Metrics P = Efficiency Metrics k = "Out-of-Balance" Penalty Factor

$$Q = \sum_{i=1}^{n} C_{q, i} * \frac{(KPI_{q, i} - KPI_{q, industry} _ average _ for _ i)}{KPI_{q, industry} _ average _ for _ i}$$

$$P = \sum_{i=1}^{m} C_{p, i} * \frac{(KPI_{p, i} - KPI_{p, industry} _ average _ for _ i)}{KPI_{p, industry} _ average _ for _ i}$$

- KPI = Key Performance Indicator
- n = Total Number of Effectiveness KPIs
- m = Total Number of Efficiency KPIs
- n = m (Balanced Model)
- KPIq,i = Effectiveness KPI
- KPIp,i = Efficiency KPI
- Cq,i = Gap Direction Coefficient
- Cp,i = Gap Direction Coefficient

V. Graphical Presentation of The TBPI index

The Tonchev Performance Index is graphically represented by "The Leaf Diagram" (See the figure below). This diagram is a type of matrix with two axis: effectiveness and efficiency. Diagonally, across the center of the matrix, there is a yellow line that shows the balance between the two parameters. Additionally, there are "Line 0" and "Target Line". The first line shows the combination of points with TPI index equal to zero, whereas the second line points the desired performance. The slope of these lines determines how much a particular company is penalized for not being able to balance quality with productivity. The closer a given point is to the upper right side of the balance line, the higher the TPI index and therefore the better the performance.



VI. Advantages and Limitations of The TPI Index

The TPI index differs substantially from the conventional performance indexes. Its main advantages and limitations can be summarized as follows:

Advantages:

Balance between effectiveness and efficiency - Equal attention is paid on both goals. Therefore, if there is a imbalance between effectiveness and efficiency, the company's performance is penalized, and the index is lower.

<u>**Transparent Results**</u> – The index value tells exactly the company's deviation from the industry average. Depending on the performance, this value can be positive, neutral, or negative.

<u>Normalization</u> – All metrics included in the index calculation have the same units, namely they are all in percent, (%).

Adjustability – When necessary, the index allows updates and corrections.

<u>**Comparability</u>** – Since the company performance is measured by percentage deviation from the industry average, the index compares "apples with apples".</u>

Dynamics – Except for the penalty factor, the index does not rely on static coefficients. Instead, it is based on dynamic industry data.

Limitations:

Database Requirement – The index requires a large database.

<u>Pair Principle</u> – Since the index's effectiveness-efficiency balance must exist, the addition of new effectiveness metrics always has to correspond with the inclusion of equal amounts of efficiency metrics.

<u>Penalty Factor</u> – Even though the penalty factor has a logical justification its value can be biased.

VII. Conclusion

The TPI index is a performance benchmark tool that gives a numerical value of the call centers' performance. It is a balanced index that can be used for comparisons of different types of call centers with various business operations. The strength of the TPI index is its simplicity and dynamic nature. It can help organizations to identify their weak areas and show the path leading to improved financial and market results. In conclusion, just as the finish time determines the performance of the long-distance runner, the TPI index is a single aggregate value that measures a call center's competitive performance.

APPENDIX III - PRODUCTS AND SERVICES

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- Banking
- Brokerage
- Credit Card
- Mortgage
- Government:
- Federal
- State
- Local
- Dept. of Defense
- Emergency Services
- Healthcare:
- Health Care Provider
- Health Plan Management (HMO)
- Help Desk:
- Employee Technical
 Issues
- Employee Benefits Issues
 Insurance:
- Health
- Life
- · Property/Casualty
- Other Insurance
- Utilities:

- Aerospace
- Agricultural
- Automotive
- Construction
- Materials/Tools
- Office Equipment
 Non-Profit:
- Non-Profit
- Non-Profit
- Publishing & Media:
- Books, Magazines, Newspapers
- Television & Radio Media
- Movies/Music
- Educational Testing
- Retail:
- Department Stores
- Catalog
- Technical Support:
- Computer Products
- Consumer Products
- Technology:
- Utilities
- Computer Software
- Utilities
- **Utilities Services:**
- Cable-Broadband-
- SatelliteData/Internet Service Provider
- Telecommunications
 Provider
- Cellular
- Teleservice Providers:
- Inbound
- Outbound
- Both
- Transportation:
- Toll Roads
- Vehicle Rental
 - 135
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- Small Package Shipping
- Heavy Freight Shipping
- Travel & Leisure:
- Utilities
- Cruise
- Lodging
- Travel Agency
- Other Travel
- Utilities:
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- Gas
- Water
- Heating Oil

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- Negotiation and Mediation
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- Improving Call Center Performance Through Optimized Site Selection
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- The CRM Performance Index
- The Impact of an Outbound Contact Management System on Agent Productivity
- The New Virtual Paradigm of CRM
- The Use of Symbols to Capture Caller Data
- Call Center Assessment
- Customer Touch Points
- What is a CRM-Interaction Center
- Customer Lifetime Value Calculator
- International Benchmarking
- Planning your Benchmark Study
- The Tonchev Performance Index for Call Center Best Practices
- The Technology of Self Service
- Self Service Solutions
- ROI Calculations for e-Business Improvement Initiatives
- Multi-Channel Integration
- Calculating the Value of Performance Gaps
- Customer Service Call Centers "The New Corporate Battleground"
- e-CRM Rules

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1. RealityCheck[™]

RealityCheckTM is a free Web-based tool that allows contact centers to assess the effectiveness and efficiency of their current contact center performance as compared to those in the same industry.

RealityCheck[™] includes a Balanced Performance Matrix, which plots your efficiency and effectiveness against your industry peers. Call quantity (efficiency) is plotted on the x-axis. Call quality (effectiveness) is plotted on the y-axis; combined, these provide you with a high-level view of your call center performance.

Call centers that are able to optimize customer-centric results, while containing costs are "Call Centers of Excellence;" these are centers positioned in the most desirable upperright quadrant.

Recommended for:

All contact centers. Centers that do not have sufficient analytical staff are encouraged, but not required, to use a Purdue-certified consultant (see Web site) to help them with data gathering and report interpretation. Centers with their own analytical staff should consider sending their specialist to us for training in the proper use of our benchmarking reports.



Peer Group Performance Matrix

To access RealityCheck[™], go to www.BenchmarkPortal.com and click on the RealityCheck[™] logo or for more information call 720.222.0470

2. Peer Group Benchmark Report

Managers may want to a) see additional metrics that are specific to their sector; and b) know that the peer group is composed of their direct competitors. BenchmarkPortal is the trusted research organization that collects the additional data from all parties and produces the sector-specific report. ONLY anonymous and aggregate data are included as peer information in the reports.

Recommended for: Operations that are part of an identifiable competitive peer sector and that have key performance metrics that are specific to that sector.



For more information call:720.222.0470 or Email: Sean@BenchmarklPotal.com. **3. Call Center Certification**

Contact center leaders who want their centers to be certified as a Center of Excellence have urged us to develop this program, which utilizes our database, expertise and proprietary performance indices.

Recommended for:

- All contact centers that strive to achieve maximum effectiveness and efficiency
- Best practices organizations
- Outsourcers
- Multinationals wishing to instill best-practices globally



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140

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4. Echo[™]- Caller Satisfaction Measurement

'Every Customer Has Opinions...even if no one asks^{TM'}

"With Echo, we now incorporate the 'voice of the customer' into everything we do. We love it."

- Joyce Whalen, eBay Director of Customer Experience

BenchmarkPortal introduces **Echo**[™], the ultimate service improvement solution—a groundbreaking new approach for translating direct customer feedback into rich actionable business intelligence. **Echo**[™] challenges the traditional approach to measuring and improving customer service. The status quo has consistently fallen short of delivering the kind of results that create and maintain loyal customers. Based on our research, we have taken the best practices of the most successful companies and incorporated them into a dynamic closed-loop approach that really delivers.

Do more than just capture customer opinion. Use it.

Over 93% of companies say they collect customer opinions. Unfortunately...

Do you collect customer opinions?

No 7% Yes 93% 67% of those companies don't use the opinions to influence internal change.

Yes

33%

Do you use the customer opinions collected to influence internal change?

EchoTM provides an all-in-one solution:

- Scientifically-based customer feedback collection
- Primary source for monitoring agent effectiveness
- Service recovery, including post-recovery effectiveness measurement
- Core cause determination and analysis
- Effective, behavior-based agent coaching
- Meaningful metrics to track results
- Real-time Reporting
- Business intelligence needed to make informed decisions

The customer feedback collection component of **Echo**TM may be purchased as a standalone tool. However, we recommend the full **Echo**TM product as your ultimate service solution. We can help you develop and implement our revolutionary monitoring and coaching approach without loss of precious time in confronting technology and implementation issues. In most cases, we can launch **Echo**TM in just 60 days.

Recommended for: All contact centers that are interested in leveraging customer feedback to improve customer satisfaction.



For more information call:720.222.0470 or Email: Sean@BenchmarklPotal.com.

5. Benchmarking 201: Your Competitive Advantage

This NEW hands-on workshop is for all call center professionals who need a sound benchmark methodology to audit current performance results, then prioritize solutions toward achieving a competitive ROI. Participants will calculate the cause/cost of poor/excessive performance by case studies and quantify a 30-day impact plan. Attendees earn Certification as a Benchmark Specialist through The Center for Customer-Driven Quality[™] at Purdue University.

What Will I Learn?

- **Benchmarking the Difference**: Satisfaction, Retention, Operations, Cost containment
- **Competitive Performance**: Peer Reports, Gap analysis on effective/efficiency metrics
- Solutions Savings: Root Cause impact, Simulation charts, quantifiable action plan

Recommended for those who need a Peer-Industry Benchmark



For more information call:720.222.0470 or Email: Sean@BenchmarklPotal.com.

6. College of Call Center Excellence

The College of Call Center Excellence provides training courses that result in certification of contact center team members. Courseware is available for managers, supervisors and agents. Courses are taught both in-person and online. Some are taught in conjunction with BenchmarkPortal.

Recommended for:

All centers. Training is a budget item for all centers that is rarely optimized. We can help you to get more for your training dollar.



For more information call:720.222.0470 or Email: Sean@BenchmarklPotal.com.

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Utilities Utilities Automotive Banking Brokerage Telecommunications Cable/Broadband/Satellite Industry Benchmark Report Best-in-Class Call Center Performance Catalog Utilities Computer Software Principal Investigator Consumer Products Dr. Jon Anton **Purdue University** Credit Card **Financial Services** Government & Non-Profit Benchmar Healthcare Provider Help Desk Insurance Technical Support Insurance – Health **Utilities** Insurance – Life *Transportation* Insurance – Property & Casualty Travel & Hospitality **Outbound Teleservices** Utilities Wireless Publishing & Media

7. Industry Reports Available From BenchmarkPortal, Inc.

These industry reports contain hundreds of call center benchmarks and best practices for

a specific industry:

Retail

Aerospace

Secure online ordering is available at: http://www.BenchmarkPortal.com/bookstore or call:720.222.0470 or Email: Sean@BenchmarklPotal.com.

*Our Worldwide Industry Benchmark Reports provide best practices for call centers in three primary geographical regions: North America (U.S.A & possessions, Canada, Mexico), EMEA (Europe, Middle East, Africa), and Asia Pacific (Australia, China, India, Japan, New Zealand, Malaysia, The Philippines, Taiwan).

147

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Worldwide*

8. Best Practice Reports

The team of researchers from BenchmarkPortal and The Center for Customer-Driven Quality[™] at Purdue University are turning their focus to your most vital resource: **Your People**.



Best Practices in Quality Monitoring and Coaching

We are pleased to announce our Best Practices in Quality Monitoring and Coaching study. This report is the fruit of almost nine months of research and analysis by the team of experts headed by Dr. Jon Anton, of Purdue University's Center for Customer-Driven Quality.

This study involved over a dozen carefully-selected call centers of distinction. This is the first study of its kind and resulted in a work of extreme interest and insight.

Best Practices in Workforce Management

Highlights of the reports:

- Study Findings: What are the impact factors in best practice companies.
- Workforce Optimization Cycle and Components
- Forecasting and Scheduling Alternatives
- Workforce Management Roles & Responsibilities
- Workforce Management Metrics
- Developing Optimal Schedules



For more information call:720.222.0470 or Email: Sean@BenchmarklPotal.com.

9. The Anton Press

The following pages contain a listing of our current books as well as an order form. Secure online ordering is available at www.AntonPress.com.



Business Navigation

Only two centuries ago, early explorers (adventurous business executives of those bygone days) were guided primarily with a compass and celestial navigation using reference points like the North Star. Today's busy executive also needs guidance systems with just-in-time business intelligence to navigate through the challenges of locating, recruiting, keeping, and growing profitable customers. The Anton Press provides this navigational system through practical, how-to-do-it books for the modern day business executive.

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20:20 CRM A Visionary insight into unique customer contacts

The contact center is at the heart of many businesses today, and CRM initiatives are making customer contact even more critical to the health of every company. 20:20 CRM provides a strategic view of where businesses should be going with their customer contact operation, with practical examples of how to get there.

ISBN 0-9630464-5-4 By: Dr. Jon Anton and Laurent Philonenko Price: \$24.95

Benchmarking at its Best for Contact Centers

Done right, and done regularly, benchmarking provides improved work life, career advancement and substantially increased earnings on a consistent basis. This book is an essential manual for continuous improvement peer group benchmarking that shows convincingly why proper professionalism in today's environment requires benchmarking. Includes valuable information on how to benchmark through BenchmarkPortal and describes the latest products and processes to help you get the most from this crucial activity. Also addresses emerging best practices in key areas such as: customer satisfaction measurement and using the voice of the customer for monitoring and coaching, agent satisfaction measurement, as well as the new symbolic language for desktop software that will reduce the time of data entry and interpretation for your agents in the future.

ISBN 0-9719652-1-8 By: Bruce Belfiore with Dr. Jon Anton **Price: \$9.95**

Call Center Benchmarking "How 'good' is good enough?"

This "how to" book describes the essential steps of benchmarking a call center with other similar call centers, with an emphasis on "self assessment." The reader learns how to plan a benchmark, how to collect the correct performance data, how to analyze the data, and how to find improvement initiatives based on the findings. ISBN 1-55753-215-X By: Dr. Jon Anton Price: \$39.95

Call Center Performance Enhancement - Using Simulation and Modeling

This book provides its readers with an understanding about the role, value, and practical deployment of simulation an exciting technology for the planning, management, and analysis of call centers. The book provides useful guidelines to call center analysts, managers, and consultants who may be investigating or are considering the use of simulation as a vehicle in their business to responsibly manage change. ISBN 1-55753-182-X By: Jon Anton, Vivek Bapat, Bill Hall Price: \$48.95

Contact Center Management "By the Numbers"

With the ever increasing complexity of multi-channel customer contact handling, it is significant that this book addresses the challenges of managing such a contact center comprised of customer service agents, documented workflow processes, and enabling technology. Integrated reporting of calls, e-mails, Web-chat, and Web selfservice becomes key.

The authors have written a very practical guide to managing a customer contact center "by the numbers." In contrast to most other departments in a company, the contact center has a constant flow of available performance metrics that are critical for the manager to use in making real-time decisions. The challenge is always what action to take when the "numbers change," and what remedies are best suited for specific performance gaps. ISBN 0-9761109-0-3 By: Dr. Jon Anton and Kamál Webb Price: \$32.95

Customer Obsession: Your Roadmap to Profitable CRM

Finally, here is a book that covers the complete "journey" of CRM implementation. Ad Nederlof and Dr. Jon Anton have done the near impossible: to position CRM in such a way that it makes practical sense to C-level executives. Beginning with the title of the book, "Customer Obsession," on through the last chapter, this book positions CRM for what it really is, namely, a complete change in corporate strategy, from the top down, that brings the customer into focus. ISBN 0-9719652-0-X

By: Ad Nederlof and Dr. Jon Anton Price: \$24.95

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Customer Relationship Management: The Bottom Line to Optimizing Your ROI

Customer Relationship Management recommends effective initiatives toward improving customer service and managing change. Creative methodologies are geared toward building relationships through customer-perceived value instruments, monitoring customer relationship indices, and changing the corporate culture and the way people work.

ISBN 0-13-099069-8

By Dr. Jon Anton and Natalie L. Petouhoff Price: \$33.33

Customer Relationship Management Technology: Building the Infrastructure for Customer Collaboration From our research on the American consumer, it has become very clear that potentially the best customer service strategy is "to offer every possible channel for the customer to help themselves, i.e., self-service." Customer actuated service is mostly driven by technology, and the "art" of self-service is to ensure that the technology is intuitive, easy to use, and that the customer is rewarded for "having done the job themselves." This book delves into all the technology solutions that enable self-service. The reader will find a robust description of the technology alternatives, and many examples of how self-service is saving companies money, while at the same time satisfying customers.

ISBN 0-9630464-7-0

By Dr. Jon Anton and Bob Vilsoet Price: \$39.99

Customer Service and the Human Experience: We, the People, Make the Difference

One of the leading challenges for today's managers is the training and motivating of excellent agents. While much attention has been focused on the technology and benefits of providing multiple channels for customer contact, little attention has been paid to handling the human part of the equation-training CSRs to field more than just telephone communications. Great statistics and benchmarking help the customer service/call center professional keep ahead of the ever-changing business environment as the authors successfully blend the critical human aspect of the center with the ever growing need for metrics and the bottom line.

ISBN 0-9719652-7-7 By Dr. Rosanne D'Ausilio and Dr. Jon Anton Price: \$34.95

Customer Service at a Crossroads: What You Do Next to Improve Performance Will Determine Your Company's Destiny

By consistently delivering information about products, services and information to customer service agents, based on their individual skill levels—at the right time in the right way, organizations are also delivering a consistent, clear understanding of corporate objectives and vision. The result: thousands of customer interactions that delight the customer and improve retention as well as corporate profitability. Optimizing agent performance can quickly deliver incredible returns beyond customer loyalty. That is what this book is all about. ISBN 0-9719652-6-9 By Matt McConnell and Dr. Jon Anton Price: \$15.95

e-Business Customer Service: The Need for Quality Assessment

With the advent of e-business technology, we suddenly find ourselves with completely different customer service channels. The old paradigms are gone forever. This books details how to measure and manage e-business customer service. The book describes the key performance indicators for these new channels, and it describes how to manage by these new rules of engagement with specific metrics. Managing customer service in this "new age" is different, it is challenging, and it is impossible to migrate from the old to the new without reading this book. ISBN 0-9630464-9-7 By Dr. Jon Anton and Michael Hoeck Price: \$44.00

Enabling IVR Self-Service with Speech Recognition

Everyone is talking about speech recognition and its many applications. The hype is loud and clear. However, in reality, most contact center practitioners are still on the sidelines watching and waiting to hear more about the success stories and the realistic applications of this marvelous new technology. In this book, the authors report on actual case studies where speech recognition has been successfully applied to enable self-service through the IVR. Readers will learn: a) who the major players are in speech recognition, b) how to determine what applications are best suited for speech recognition. c) what results they can expect from speech recognition implementations. d) which companies have successfully applied speech recognition, and e) where they will find the biggest financial pay-back for speech recognition.

151

ISBN 0-9719652-9-3

By Dr. Jon Anton and G.P. Paul Kowal Price: \$34.95

From Cost to Profit Center: How Technology Enables the Difference

This book is a series of case studies in which we collected performance metrics before and after implementation of specific technology solutions for call centers. In each case study we saw varying levels of improvement, and were then able to quantify the financial impact in terms of ROS, and in some cases, in terms of earnings per share. For call center managers contemplating the addition of new call center technology, this book will be an asset in better understanding the impact of technology in enabling higher performance.

ISBN 0-9719652-8-5 By Dr. Jon Anton and R. Scott Davis Price: \$44.95

How to Conduct a Call Center Performance Audit: A to Z

Call centers are an important company asset, but also a very expensive one. By learning to conduct a performance audit, readers will be able to understand over fifty specific aspects of a call center that must be running smoothly in order to achieve maximum performance in both efficiency and effectiveness of handling inbound customer calls. ISBN 0-9630464-6-2 By Dr. Jon Anton and Dru Phelps Price: \$34.99

Integrating People with Process and Technology: Gaining Employee Acceptance of Technology Initiatives This book contains valuable information regarding the "people" side of technology initiatives. Many companies buy the best hardware and software, and spend thousands of dollars implementing technology only to find out that the employees resist the changes, and do not fully adopt the new, and possibly, improved processes. By understanding how to manage people during change, managers will see a much quicker ROI on their technology initiatives.

ISBN 0-9630464-3-8 By Jon Anton, Natalie Petouhoff, & Lisa Schwartz Price: \$39.99

Listening to the Voice of the Customer

With the help of this book, the professional skills you need to measure customer satisfaction will lead you to different approaches until you have found the one that best fits you, your company, and your organization's culture. ISBN 0-915910-43-8

By Dr. Jon Anton Price: \$33.95

Managing Web-Based Customer Experiences: Self-Service Integrated with Assisted-Service

The time to grow your call center into a multi-channel customer contact center is now. This book has the power to help you increase customer satisfaction through the implementation of Web self-service. The value of this book can be calculated in terms of calls deflected from your call center, increased customer retention, an ultimately in a healthy return on your investment. In this book, the authors take you step-by-step through the best practices that lead to a successful self and assisted-service strategy.

ISBN 0-9719652-4-2 By Dr. Jon Anton and Mike Murphy Price: \$35.95

Minimizing Agent Turnover: The Biggest Challenge for Customer Contact Centers

Some agent turnover can be functional, but most turnover is dysfunctional and can be very expensive. This book explores the types of turnover, including internal versus external: and documents the typical causes of agent turnover. Most importantly, this book describes a methodology for diagnosing the root causes of your agent turnover, and suggests improvement initiatives to minimize agent turnover at your customer contact center. ISBN 0-9630464-2-X By Dr. Jon Anton and Anita Rockwell Price: \$39.99

Offshore Outsourcing Opportunities

For call center executives wanting to explore and understand the benefits of offshore outsourcing, the authors have brought together 'under one cover' a comprehensive guide that takes the reader through each step of the complex issues of outsourcing customer service telephone calls to agents in another country. With the pressure of today's competitive climate forcing companies to take a hard look at providing higher guality customer services at lower costs, this book is a "must read" for every call center executive.

ISBN 0-9719652-3-4

By Dr. Jon Anton and John Chatterley Price: \$34.99

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Optimizing Outbound Calling: The Strategic Use of Predictive Dialers

The content of the book is organized in such a way as to assist the reader in understanding the complete end-toend process of automated outbound call dialing. Specifically, the reader will find the following steps described in detail: a) preparing a needs assessment, b) selecting and contracting a predictive dialer supplier, c) implementing a predictive dialer solution, d) applying change management principles to ensure "buy-in" by existing agents, d) handling and using dialer reports, and finally, e) benchmarking dialer improvements to ensure attaining the anticipated ROI.

ISBN 0-9719652-2-6

By Jon Anton and Alex G. Demczak Price: \$39.99

Selecting a Teleservices Partner: Sales, Service, and Support

This book tackles one of today's hottest topics: Customer Contact Outsourcing. Companies are in a guandary about the myriad of teleservices questions they're faced with, such as deciding to outsource, cost / benefit analysis, RFP development, proposal assessment, vendor selection, contractual requirements, service level performance measurement, and managing an ongoing teleservices relationship. With the authors help, readers will find this complex issue straightforward to approach, understand, and implement. ISBN 0-9630464-8-9 By Jon Anton and Lori Carr Price: \$34.99

The Four-Minute Customer: Getting Jazzed about Your People and Quality Management in Your Call Center

This is a very unique book directed at developing and maintaining "Top Reps" that are uniquely motivated to deliver the highest possible guality of caller customer service at your center. Learn what it takes to find and lead the best of the best. Don't settle for mediocrity. Instead, learn how to manage the best in class customer contact center by attracting and keeping Top Reps at your organization.

ISBN 0-9630464-1-1

By Michael Tamer Price: \$34.99

Wake Up Your Call Center: Humanizing Your Interaction Hub, 3rd edition

With new and up-to-date material, this third edition speaks volumes about the need to reinforce the human element in the equation. This is a straight forward guide for humanizing the impersonal, with practical to-do's, real life examples, and applications to delight your customers. In depth chapters include mixed messages, change and stress management, conflict resolution, rapport building, and communicating powerfully, just to mention a few. ISBN 1-55753-217-6 By Rosanne D'Ausilio, Ph.D Price: \$44.95

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155

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APPENDIX IV - GLOSSARY OF TERMS

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157

Α

Abandon Rate: This is the percentage of calls that get connected to the ACD, but are voluntarily terminated by the caller before reaching an agent, or before completing a process within the IVR. The abandon rate is the percentage of calls that are abandoned compared to calls received.

ACD: Automatic Call Distributor. A device that forwards incoming calls to the next available agent or answering position.

Adherence to Schedule: A measure of whether agents are "on the job" as scheduled. This percentage represents how closely an agent adheres to his/her detailed work schedule as provided by the workforce management system. 100% adherence means that the agent was exactly where they were supposed to be at the time projected in their schedule. The scheduled time allows for meetings with the supervisor, education, plus answering customer phone calls. The question, "how often do agents deviate from their schedule" is answered by this metric.

After Call Work Time: This is the average amount of time an agent spends on performing follow-up work after the agent has disconnected from the caller. The data for after call work time is taken from the ACD and should be calculated by individual and group, daily, weekly, and monthly.

Agent: A general term for someone who handles telephone calls in a call center. Other common names for the same job include, but are not limited to: operator, attendant, representative, customer service representative (CSR).

Agent Turnover: The total numbers of agents that left the center during a specified period divided by the sum of the number of agents at the beginning of the specified period and the number of newly-hired agents during the same period, less the total number who left during the specified period.

ANI: Automatic Number Identification. ANI is a service of Utilities carriers, which identifies the telephone number of the calling party. It is commonly used for billing, call routing and database synchronization. There are several specific technologies that fit under the umbrella of ANI, including caller ID.

Auxiliary Time in Percent: This is the average amount of time per shift, in percent, that an agent is logged into an Aux state. This should include all authorized off-line time, i.e., time set aside for handling e-mails, training, or other job-related tasks.

Average Attendance in Percent: This is a percentage representing how often an agent is NOT absent from work due to an unplanned absence (not to include excused absences, i.e., vacation, FMLA, jury duty, etc.). Take the total number of unexcused absences and divide it by the total number of absenteeism opportunities and subtract that number from 100.

Average Cost per Call: This is the sum of all costs for running the call center for the period divided by the number of calls handled in the call center for the same period. This

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would include all calls for all reasons whether handled by an agent or technology, such as IVR.

Average Handle Time: An internal metric that is the sum of talk time, hold time, and after call work time.

Average Percent Occupancy: This is the percentage of time that an agent is in their seat connected to the ACD, and either engaged in a call or ready to answer a call as compared to the total number of hours at work.

Average Sale Value per Sale: When agents are taking orders, it becomes important to know the average sale value of individual sales. This number is determined by taking the total sales in dollars during a period of time, let's say a week, and dividing this by the total number of sale calls handled during the same period of time.

Average Speed of Answer (ASA): This is the total queue time, divided by the number of calls handled. This includes both IVR-handled calls as well as calls handled by a live agent.

Average Talk Time: Total number of seconds the caller was connected to an agent.

Average Time in Queue: This is the average wait time that a caller endures. This differs from average speed of answer because this calculation includes only calls that actually had a wait time. This metric is also known as average time of delay.

В

Best-of-Industry (Peer) Category: This represents the top twenty five percent of the companies within a given industry (peer group) with the best Tonchev Performance Index (TPI). See Appendix II for a detailed description of TPI.

Best Practice: Best practice is the best performing metric in a category.

Budget: The annual call center budget is the total annual dollar amount allocated for all expenses associated with the operation of the call center for which the call center manager is accountable. The annual budget should include all fully loaded direct and indirect costs for budgetary line items such as labor, benefits, and incentives for agents, management, training, and support personnel; HR costs (e.g., recruiting, screening, training); telephony expenses (toll, trunks, equipment); technology purchases/installation (hardware, and software); technology maintenance (hardware, and software) network; furniture, fixtures, decorations, etc.; Utilities (gas, water, power, UPS backup); maintenance (repair, janitorial, upkeep); supplies; overhead expenses and charge-backs for shared corporate costs (e.g., legal, risk management, payroll administration, IT support, security, accounting, grounds keeping, real estate, floor space, common areas, etc.) as applicable.)

С

Calls per Hour: The average number of calls that an agent handles per hour, and is equal to the total calls handled during a working shift divided by the total time (in hours) logged into the telephone system.

Cost per Call: This is the sum of all costs for running the call center for the period divided by the number of calls handled in the call center for the same period. This would include all calls for all reasons whether handled by an agent or technology, such as IVR. You can also just calculate the cost per call for agent-handled calls. The number of calls received will be captured by the ACD. The total cost of the center can be obtained from your accounting department.

Cross-Sell: A cross-sell occurs when an agent recognizes that the caller might be able to use a product from the same company, but in a totally different product line within the company. For instance, an agent at a banking call center who is opening a savings account for a caller might recognize the advantage for the caller to purchase a CD from the bank at a higher interest rate.

CTI: Computer-Telephony Integration refers to the linkage of a telephone switch (ACD, PBX) and computer systems to enhance call processing. Common applications include screen pop, simultaneous voice and data transfer, and IVR.

Customer Access Channels: Customer access channels are the multiple ways that customers can reach out and contact a company. A few of the obvious access channels are telephone, e-mail, fax, normal mail, kiosk, and face-to-face.

Customer Centric: Placing the wants and needs of the customer as the central focus of all business practices within the firm. Seeing your business through the "eyes of the customer."

Customer Lifetime Value: The imputed dollar revenues or profits (depending on formula) generated by the customer for as long as the customer remains with the firm.

Customer Retention: Keeping a customer as opposed to losing the customer to the competition. A percentage of this figure would be the tenure of the average customer with the firm as computed by the sum of the time of all customers with the firm divided by the number of customers.

Customer Satisfaction: This is a state of mind that a customer has about a company in which their expectations have been met or exceeded over the lifetime of the product. This leads to company loyalty and product repurchase.

Customer Share: The percent of those who purchase the item of interest from a given firm. Computed as the number of customers who purchase the item from a given firm divided by the numbers of customers who purchase the item from all firms combined.

Customer Value Segment: Customer value segmentation strives to segment customers based on their financial value to the company. This value is usually based on a combination of the total amount of money that a customer spends with the company, and 161 Copyright© 2009 BenchmarkPortal LLC

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the profitability of that revenue stream. The best example would be the frequent flyer programs that the Utilities have. United, for instance, has the following value segments with its frequent flyer program: a) regular frequent flyer, b) premium frequent flyer, and c) 1K frequent flyer.

D

DNIS: Dialed Number Identification Service. A carrier service for 800/888 and 900 numbers that forwards the number dialed by the caller to the called party.

Ε

Effectiveness Index: The index is calculated by statistically combining into an index those metrics that are indicative of effective performance. This is considered to be quality and is impacted by customer-focused processes.

Efficiency Index: The index is calculated by statistically combining into an index those metrics that are indicative of efficient performance. This is considered to be productivity and focuses on the cost of operating the business.

External Metrics: These are usually characterized as "soft" numbers as they are the collected attitudes, opinions, and emotions of customers or other interested parties. The data may be collected by survey, focus group, or interview methods. This represents the customer perspective.

F

Focus Group: A personal, simultaneous interview among a small group of individuals. It depends more on group discussion than individual responses for the data generated.

Н

Help Desk: The term typically applied to an "internal" call center that handles primarily calls from employees about technical problems with their computer, monitor, printer, and the like.

Hold Time: This is the average number of seconds that an agent places customers on hold during a call. Most ACDs can provide this number as a total number of hold seconds and then you can compute the average hold time.

I

Internal Metrics: These are generated by computers internal to call center technology (PBS, ACD, or VRU) or through departments such as Accounting, Finance, or Human Resources. Internal metrics are commonly perceived as "hard" numbers. Examples include average handle time, queue time, and abandon rate. This is generally not representing the view the customer has of your company.

IVR: Interactive Voice Response. Technology that allows a customer making an inbound call to interact with the data systems by responding to a menu of options. Responses are typically entered by pressing the keys on the telephone keypad; however, voice Copyright© 2009 BenchmarkPortal LLC 162

recognition is becoming more commonly integrated into the process, thus providing a more useful tool.

IVR Opt Out: Measure in percent, this is the number of callers who during their call to your center initially attempt finding solutions via the IVR, but then elect to speak with a live agent. This is not the same as those who choose to speak to a live agent as an initial menu option.

Μ

Moment of Truth: MOT is a critical interaction between the customer and the product or service or employee that determines whether the customer will continue to purchase from the vendor.

Ο

Occupancy: See Average Percent Occupancy.

Order Taking and Tracking: This is a specific function of customer service and it means that this call center specializes in just taking orders and tracking orders.

Outbound Performance Metrics: These are all the measurements that indicate the performance of an outbound telephone agent. Examples might include calls/agent/shift or sales/agent/shift.

Outsourcing: Contracting with an outside company/vendor to handle some or all of your company's inbound and/or outbound telephone calls or contacts.

Ρ

Peer Group: Peer group does not necessarily connote competitors, but most often are the call centers that have the same profile of activities that you have. For instance, a peer group might be all call centers handling mostly inbound calls that are mostly business-tobusiness in a call center of over 100 agents for a company with annual revenues of over one billion dollars.

Percent Abandoned: See Abandon Rate

Percent Agent Utilization: Agent utilization is a calculated metric reflecting the percentage of an agent's shift where the agent is logged into the system, engaged in active "telephone mode" which involves "talk time (ATT)", "hold time (AHT)", and "after-call-work time (ACWT)." Utilization equals the product of average call handle time (talk time + hold time + after call work time) and the average number of inbound calls per agent per shift (ACPS), divided by total time the agent is connected to the ACD and ready to handle calls during a shift, i.e., occupancy in minutes.

$$Utilization = \left(\frac{(ATT + ACW)(ACPS)}{Occupancy_in_min.}\right)X100$$

163

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Percent Attendance: Actual number of shifts worked divided by the planned number of shifts times 100.

Percent Blocked Calls: An internal metric that is the number of callers who received a busy signal and, hence, could not get through to the ACD.

Percent Calls Handled on the First Call (aka, First Time Final): This is the percentage of calls that were completely resolved during the course of the first inbound call initiated by the customer, and therefore do not require a call back.

This information is often hard to find or inaccurate. Some clients calculate it based on the coding an agent does at the end of a call. If this is the case, the information will be in the ACD. However, this type of calculation almost certainly overstates the percent, since it only subtracts those callers who an agent is certain will call back later; many callers whose issues have been coded by agents as having been resolved will almost certainly call back later and therefore the number is lower. The best way to calculate first time final is to analyze call data over a period of time. This is made easier if the client has a CIM package.

Percentage of Calls Placed in Queue: An internal metric, which is simply the number of calls placed in the queue divided by the total of all calls received by the center.

Percentage of Calls Transferred: An internal metric that is the percentage of total calls transferred from the original agent to someone else.

Q

Queue Time: This is the average wait time that a caller endures. This differs from average speed of answer because this calculation includes only calls that actually had a wait time. This metric is also known as average time of delay.

R

Rejection: The customer's state of mind such that disengagement from the current relationship has already been decided and has been or soon will be implemented. Negative word of mouth is likely to occur.

S

Service level: This is a broad-based term that is used to measure productivity; however, its use is not exclusive to the productivity of call handling. In contact centers it commonly defines X amounts of output in Y amounts of time. For example 80 percent of calls answered in 20 seconds.

Т

Talk Time: This is the average amount of time an agent spends on performing follow-up work after the agent has disconnected from the caller.

Total Annual Budget: The annual dollar amount allocated for all of the expenses associated with the call center including (but not limited to): Utilities expense, salaries, incentives, equipment, and supplies.

Total Calls Offered: An internal metric for all calls presented to the center including blocked, abandoned, and handled. This includes calls handled by technology.

Touch-point: Touch-point is a "buzzword" for customer access channels.

U

Up Sell: To sell a higher value product to an existing customer. For example, to lease a more expensive copier to an existing customer. Also, see Cross Sell.

V

Value Creating Gap: This represents a performance gap where your call center is doing better than your peer group.

Value Destroying Gap: This represents a performance gap where your call center is doing worse than your peer group.

Voice Response Unit (VRU): See IVR.

W

Word of Mouth (WOM): What a customer hears about a product, service, company, etc., usually from friends or family. Also rumors from unspecified sources.

Wrap Up Time: See "after call work time."

Misc

80% of Calls Handled in xx Seconds: This is the number of seconds in which 80% of your calls are handled.

Appendix O GARTNER INC. – CUSTOMER INFORMATION SYSTEM MAGIC QUADRANT 2009



Publication Date: 15 June 2009

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Magic Quadrant for Utilities Customer Information Systems

Zarko Sumic

For buyers of customer care and billing solutions in the energy and utilities market, we map vendors' products for customer information systems.

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WHAT YOU NEED TO KNOW

After the downturn following Enron's demise in late 2001, the utility industry has increased IT investment levels, especially for IT applications addressing operational excellence needs, such as enterprise asset management (EAM), mobile workforce management and service delivery management. The customer service provisioning area, however — although a significant contributor to a utility's overall cost structure — has not experienced the same IT spending growth. Most of the cost components of customer care and billing continue to trend down due to more-mature technology and the application of best practices.

Despite the current focus on reducing the cost of customer service and the potential benefits that can be achieved by replatforming legacy billing and customer care solutions with commercial off-the-shelf (COTS) customer information system (CIS) products, North American utilities operating in the regulated retail environment still struggle to justify costly CIS replacements. The low level of activity among Tier 1 energy companies indicates a discrepancy between the price/cost of a CIS replacement and the perceived benefits that a new CIS can provide to an integrated distribution company (such as one that manages asset, commodity and retail functions) that is focused on operational excellence.

Based on interactions with our clients and vendors focused on different geographies, we see that, after almost a decade of preparing for retail competition, most European utilities have updated their customer care and billing platforms with COTS CIS products to instill customer centricity into legacy CIS environments and enable flexible rate options. Although the Asia/Pacific market (which is undergoing liberalization and contestability, and still hasn't achieved the same CIS COTS level of saturation as in European Union member countries) and Eastern European energy market (still ripe for introduction of the best practices and automation through new CIS COTS products) are more active, the economic implications of the global financial crisis have left utility IT budgets in many regions in a holding pattern — particularly for investments such as in CISs, which are perceived as discretionary.

The standstill of retail restructuring in North America and the current financial challenges have dampened the CIS market during the past several years. This has damaged the viability of some CIS products and service providers, and has negatively affected R&D investment. As a result, the CIS market for products and services — such as customer care and billing business process outsourcing (BPO) — continues to be volatile, as demonstrated by several acquisitions in 2008 and 2009. For example:

- Nexant acquired Excelergy from the Dutch private equity company Brinvest.
- Hansen Technologies acquired Peace Software from First Data.
- Vertex primarily a customer care outsourcer acquired CIS assets and services from Alliance Data Systems, and is now contemplating entry into the CIS product market by offering a new version of its legacy outsourcing platform eCIS.

Increased focus on energy sustainability and the security of supply, with a consequent focus on smart grid and advanced metering infrastructure (AMI), has made an impact on the CIS market (see "U.S. Stimulus Package to Jolt Intelligent Grid IT and Operational Technology Investments"). One of the key requirements of smart grid is to integrate consumers into energy markets, and enable better asset utilization and more-efficient energy use through programs such as economic demand response. CIS has a major role in enabling those functions through its ability to deal with new billing requirements, such as decoupling of commodity and distribution charges, time of use (TOU), feed-in tariffs (FIT), critical peak pricing (CPP) and interval billing for residential



customers. In addition, CIS should be able to address the need for different billing paradigms, such as one required through the introduction of plug-in hybrid electric vehicles (see "Plug-In Hybrid Electric Vehicles: Not 'Plug and Play' for Electric Utilities").

The mandatory rollout of energy-efficiency programs in some jurisdictions also poses new requirements, such as the ability to track customer participation in demand-response programs and energy-efficiency offerings. An additional requirement emerging in markets focused on AMI deployment is integration with AMI to support processes such as out-of-service meter reads, credit collection enforcement through remote turn on/turn off and enabling a prepayment function through AMI (see "Advanced Metering Infrastructure, Part 1: Business, Regulatory and Technical Considerations").

Legacy systems are not able to meet many of those requirements and, in many instances, are perceived as a barrier for attaining benefits from AMI and smart grid investments. Furthermore, scalability and performance requirements arising from the increased volume of metering data and more-frequent billing (resulting from requirements to provide consumers with more-frequent feedback on their consumption) are introducing even more requirements that legacy CIS systems cannot address.

When selecting technology partners, CIS users must weigh not only criteria that will foster operational efficiency and cost reduction, but also vendor products and services to ensure they have the scalability and flexibility needed to accommodate changes in evolving retail markets. Selected products must offer gradual implementation and multiple deployment options.

Users should re-evaluate their retail strategies and make appropriate decisions to replace or extend legacy CISs based on their current and future needs.

In regulated retail markets, utilities should look for:

- A solution that can minimize the cost of providing customer service for customer care as well as meter-to-cash (M2C; see "Customer Service Provisioning Cost in Utility Industry")
- A CIS product's ability to provide end-to-end business process integration to achieve operational excellence by supporting service delivery optimization

In contestable retail markets, utilities should remain focused on vendors that offer:

- Advanced analytical CRM capabilities for example, churn and customer profitability analysis (CPA)
- Product extensions that facilitate interactions among retail market participants

Global concerns about climate change and energy sustainability haven't missed the CIS market. Utilities should consider CIS product capabilities to address environmental concerns by:

- Enabling marketing, selling "green" products and managing energy-efficiency campaigns (see "Utility Consumer Survey: Energy Efficiency, Do They Care and Why?")
- Handling volumes of metering data required to support energy efficiency and economic demand-response programs through "time of use" billing and "feed-in tariffs"

Additionally, CIS products must be able to address the impact of energy technology consumerization and the dual consumer supplier roles introduced by it (see "Energy Technology Consumerization: Impact on Utility OT and IT").



MAGIC QUADRANT



Figure 1. Magic Quadrant for Utilities Customer Information Systems

As of June 2009

Source: Gartner (June 2009)

Market Overview

CIS represents a core investment in an energy company's IT application portfolio. As the largest ticket item among an energy company's IT applications, CIS can account for up to 32% of the overall applications' operations and maintenance budget. Traditionally, customer care and billing solutions in utilities have been provided by system integrators using a leveraged product approach (such as Andersen [Accenture] Customer 1 and PricewaterhouseCoopers' Service 2000). The market is now a mature replacement market with numerous players offering COTS software products.

Current COTS CIS products support billing for multiple customer segments, such as residential, as well as large commercial and industrial customers (previously addressed with separate product-complex billing). Most of the leading vendors also support billing for multiple utility services, as well as metered and unmetered services/products.

In the CIS market, vendors tend to focus on:

• Unregulated markets, which require higher billing complexity, high levels of data exchange with market operators and participants, enhanced marketing/analytical functionality, and relatively low volume

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• Regulated markets that have lower billing complexity, address service order management and have a high volume of bills

Despite different vendor focus, customer care and billing solutions (aka CIS) have not separated into different product sets. Some address regulated market needs, and some address specific billing and customer care solution for retailers or network companies that operate in a competitive and unbundled market. Rather than offering products designed to meet specific needs of companies that operate in regulated or competitive markets, vendors tend to assemble a specific solution by adding additional components to their basic CIS (customer care and billing) offering.

The COTS CIS products offered "out of the box" cover essentially the M2C business processes, with a level of functionality adequate for an integrated provider, and with a customer service support level adequate for utility companies operating in regulated markets. CIS products also cover the billing and customer care needs of the network company, and are focused primarily on managing assets rather than consumer relationships in contestable retail energy markets:

- If the company operates in a competitive market, then the specific solution will be assembled by adding a market interface module (such as IDEX in the case of SAP or the equivalent market interface component in the case of Oracle).
- If the company is a competitive retailer, then, in addition to appending a market interface, the solution will also require a bolt-on CRM product (such as SAP CRM in the case of the SAP CCS/ISU product or Siebel in the case of the Oracle Utilities CC&B product — or any other third-party CIS solution in the case of other CIS vendors) to address additional functions such as customer acquisition, retention, campaign management and others.
- If the vendor does not focus on the competitive energy retail market, then a specific market interface module will be developed during the implementation project, usually by a system integrator.

Continuing pressure to maintain profitability has also restricted most vendors' R&D spending. As a result, vendors repackage current offerings to provide a more affordable, "pseudocomponentized" solution to enable phased implementation or legacy product extension, or they target limited functionality improvements, such as product usability, self-service options or multiple customer communication channel support. Vendors with diversified offerings across several markets (such as SAP, Ventyx and Oracle Utilities) continue investing in functional footprint extensions to support cross-functional process optimization initiatives. They do this by leveraging corporate integration platforms (such as in the case of enterprise application vendors, vertical industries offering SAP with NetWeaver, or Oracle Utilities in the future with Fusion) or creating a proprietary integration platform (such as Ventyx Foundation Architecture Framework). Additionally, they support business process improvement/management initiatives with key performance indicators and real-time analytics (such as SAP, Ventyx and Oracle Utilities).

In 1Q09, Gartner completed its sizing of the utilities customer care and billing market globally and provided an assessment of market growth (see "Dataquest Insight: Utilities Industry Market Size and Forecast for Customer Information Systems, 2008-2013"). We accounted for different regional drivers, the maturity of the IT application provisioning models and the extent of utility service coverage. Based on projected demographic growth and utility service coverage (as measured by the number of utility meters per capita), we provided market sizing per regions and countries from 2008 to 2013. The key findings are:

• During the five-year forecast period, year-over-year CIS worldwide revenue is projected to increase by 2.6%. CIS revenue will grow from approximately \$2.7 billion in 2008 to



\$3.0 billion in 2013. Europe will remain the largest regional market during the forecast period, although Asia/Pacific will have the fastest five-year growth.

- External service providers' work in system integration, implementation and application maintenance will grow from 1.68 billion in 2008 to 1.76 billion in 2013.
- Product vendor revenue associated with license sales, annual maintenance and professional services (including vendor training and integration services) is projected to grow at higher rates of 6.0% and 3.9%, from \$1.020 billion in 2008 to \$1.245 billion in 2013.

The following observations summarize CIS market dynamics since Gartner published the latest CIS vendor positioning in 2008:

- The CIS market continues to bifurcate into two product clusters. Two vendors that are part of the large enterprise application providers vertical offering (SAP IS-U/CR&B for Utilities and Oracle Utilities CC&B) have obtained a leadership position and have broken apart from the rest, while all others are trailing behind. The niche vendors are falling behind not primarily based on the lack of functionality or inferior product quality; rather, their position is a consequence of the lower corporate and product viability.
- Niche vendors tend to have small market share, and their M&S revenue from the installed base does not allow for adequate R&D investment to address emerging needs. As a result, in the long run, they will functionally fall behind and will not be able to address emerging customer care and billing market needs.
- We continue to see volatility in the niche segment, including changing ownership (such as the FDU Peace acquisition by Hansen, and the Excelergy acquisition by Nexant in 4Q08).
- Niche vendors tend to have a regional market focus, so most of the vendors (such as Ventyx, EDB Gruppen, Gruppo Engineering, Ferranti Computer Systems and Hansen [HUB]) do not have a presence, marketing focus or implementation partners outside their native markets.

Market Definition/Description

The Gartner Magic Quadrant concept is based on a customer-oriented market analysis (see "Modern Technology Markets Defined"). Consistent with the approach espoused by business author Geoffrey Moore, a market is "a set of actual or potential customers for a given set of products or services who have a common set of needs or wants, and who reference each other when making a decision."

Accordingly, the CIS market is composed of utility companies looking for COTS software packages (commonly known as CIS) that address business-critical utility M2C and customer care business processes. The CIS products cover two core utility life cycle processing areas — revenue management and customer management. They reach into two additional areas — commodity management and service delivery management. The CIS functional "footprint" primarily covers the operational functions of CRM:

- Account maintenance
- Order processing
- Product/service management



- Rate design
- Billing
- Credit collection
- Accounts receivable
- Statementing
- Payment processing

Customer-interaction functionality supports call center and customer self-service needs. Depending on the vendor's retail market focus — that is, competitive or regulated markets — a CIS may include some analytical capabilities, such as customer churn and CPA, or it may have more emphasis on customer service delivery, such as scheduling and service optimization.

Inclusion and Exclusion Criteria

To be included in this category, software products must cater to the majority of the functional requirements outlined above. The software products evaluated are all marketed as stand-alone customer care and billing solutions. To be considered in this market, vendors must be able to address global market needs, as well as the needs of the regulated and contestable retail markets.

Worldwide, there are more than 200 vendors that address utilities' needs for customer care and billing through a variety of product/solution offerings. Most of these are too small, in terms of company size or product scope, or have too small a geographic reach to be of interest to Gartner clients. For this reason, we evaluated only the top 10 products that meet an estimated license fee revenue threshold of \$2 million generated during the past 12-month period.

Added

This year, we have added two new vendors to the Magic Quadrant:

- Ferranti, with its MECOMS billing system, which is based on Microsoft AX Dynamic. The vendor is active in the Benelux utility market.
- Gruppo Engineering is a dominant player in the Italian market with its Net@Suite product.

Although they are emerging in the Niche Players quadrant, both companies have achieved traction in their domestic markets and are focused on expanding internationally.

Dropped

No vendors have been dropped in this year's CIS market review.

Evaluation Criteria

Ability to Execute

This axis evaluates CIS software application vendors on the quality and efficiency of the processes, systems, methods or procedures that enable their performance to be competitive, efficient and effective, and to positively affect revenue, retention and reputation. For utilities seeking CIS software, a vendor's ability to execute is primarily a combination of factors driven by product functionality, architecture and performance, and the ability to meet customer expectations

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during product delivery and operation. Software application providers are judged on their ability and success in capitalizing on their vision. Our evaluation of a vendor's ability to execute is based on these criteria:

- **Product** The breadth and availability of the vendor's products that compete in and serve the CIS market
- **Overall viability** Product quality and consistency, as well as the vendor's financial strength, including the likelihood of the continued investment in CIS software for the energy and utility market and advancing the state of the art within the provider's portfolio of products
- Sales execution/pricing Capabilities of presales structures and management activities, including pricing and negotiation, as well as the overall effectiveness of sales channels
- Market responsiveness and track record Ability and responsiveness to meet changing market dynamics
- Market execution Market share (and mind share) in the global enterprise market
- **Customer experience** Ability to provide technical and relationship support and services that drive customer satisfaction
- **Operations** Structure that is put in place to effectively meet organizational goals and commitments

Standard

Standard

Standard

Standard

Table 1 lists the relative weighting of various criteria in terms of a vendor's ability to execute in this market.

Evaluation Criteria	Weighting
Product/Service	High
Overall Viability (Business Unit, Financial, Strategy, Organization)	High
Sales Execution/Pricing	Standard

 Table 1. Ability to Execute Evaluation Criteria

Market Responsiveness and Track Record

Source: Gartner (June 2009)

Marketing Execution

Customer Experience

Operations

Completeness of Vision

This axis evaluates CIS application vendors on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and competitive forces, and how well they map to the Gartner position. CIS application providers are rated on their understanding of how market forces can be exploited to create opportunities for the provider. For utility companies seeking CIS COTS software, vendors' completeness of vision is primarily a combination of vendor domain expertise in different retail markets and customer segments, an appropriate go-to-market strategy, and focus on innovation in product functionality



and enabling technology. Table 2 lists the relative weighting of various criteria with regard to the completeness of a vendor's vision in this market. Our evaluation of a vendor's completeness of vision is based on these criteria:

- **Market understanding** Competitive position, market knowledge and mechanisms for customer feedback, combined with the ability to articulate market direction and aligned product direction
- **Marketing strategy** Ability to articulate market direction and aligned product and service offering with market requirements
- Sales strategy Ability to work with customers through its sales force and sales tools
- Offering (product) strategy Strength of R&D, capability in product design and its ability to offer image stability
- Business model Soundness and logic of the underlying business proposition
- Vertical/industry strategy Ability to provide a vertical-specific product and service for market with a different level of contestability and serving different products (for example, electricity, gas and water)
- **Innovation** Ability to have investment resources, expertise or capital for consolidation, defensive or pre-emptive purposes to address emerging market needs
- **Geographic strategy** Ability to provide products and services globally

Evaluation Criteria	Weighting
Market Understanding	Standard
Marketing Strategy	Standard
Sales Strategy	Low
Offering (Product) Strategy	High
Business Model	Standard
Vertical/Industry Strategy	Standard
Innovation	Standard
Geographic Strategy	Low

Table 2. Completeness of Vision Evaluation Criteria

Source: Gartner (June 2009)

Leaders

Leaders are vendors that would normally be included in shortlists for CIS products, for all types of utilities, worldwide. They perform profitably, grow their revenue and have a presence in all major markets. Their functionality is above average, and their technology and scalability are leading edge. They offer solutions for retailers in different market models (such as regulated and competitive) and support large utilities with multiple commodity offerings, as well as small single-commodity utilities, along with utilities focused on different customer segments. These vendors would be followed and tracked by other CIS vendors.

Leaders in this market have paired advanced technology with broad offerings and rich functionality. They are utility vertical businesses of the leading enterprise application vendors



(such as SAP and Oracle). They have demonstrated the financial viability needed to fuel R&D to support new technology requirements (such as Web services and service-oriented architecture) and enable business process integration across functional silos in utilities. SAP attained leadership status in 2003, and reconfirmed it due to the combined effects of its significant market share globally and continuing R&D investment in integration technologies and productized competitive market interface extensions. Oracle Utilities (then SPL WorldGroup) attained leadership status in 2004, and retained its leadership status in this rating due to improved corporate viability following acquisition by Oracle, solid business performance and future access to a corporate integration technology platform that can support the continuing drive for functional footprint extension.

Challengers

These vendors perform well in their selected markets or industries. Although they have a high capability and performance (in sales and growth), they may not be targeting all segments or geographies of the energy utilities industry, or they may have a more limited vision of their functionality or technology. Clients with a conservative approach to business will find lower-risk options in this sector.

In the 2009 CIS market assessment, no vendors have entered the Challengers quadrant.

Visionaries

These vendors have unique functional or technical offerings, but have constrained capabilities in geographic or financial terms. Visionaries are characterized by the ability to anticipate market transformation, such as increased analytical functionality or integration, as well as optimization for commodity and service management business processes. Clients that have a tolerance for risk and are seeking a differentiating product should consider the vendors in the Visionaries quadrant.

In the 2009 CIS market assessment, no vendors have been placed in the Visionaries quadrant.

Niche Players

Niche players in this market are still worthy of consideration. Given the size of the market (that is, more than 200 billing and customer care software products), potential buyers should consider that any listing on this Magic Quadrant is a good indication of vendor/product credibility. Nevertheless, the vendors in the Niche Players quadrant are situated here because of a geographical shortfall, narrow focus or a lack of financial strength (that is, they have not achieved financial viability compared to the market leaders), or they have not come as far as the leaders in advancing their technologies or functionality. This prevents them from being universally suitable to all customers. Clients should review carefully the vendors' target markets and capabilities. They should include them in evaluations if the vendors match their business scope, geographic areas and specific needs.

Ventyx, Indra, Gruppo Engineering, Hansen (for its Peace and HUB products), Nexant, Ferranti and EDB Gruppen are all positioned as niche players in the utilities CIS market.

Vendor Strengths and Cautions

EDB Gruppen

Strengths

 EDB Gruppen's Xellent CIS product is built on and leverages Microsoft's ERP solution — Dynamics AX.



- Xellent is fit to purpose for smaller and midsize utilities, including municipal utilities.
- The Xellent product offers lower implementation and operation costs, compared with leading CIS solutions that address diverse energy market needs and various company sizes.
- The Xellent product's reliance on Microsoft applications and technology makes it affordable for smaller IT organizations that may find the complex IT requirements of leading CIS products prohibitive, or those whose application strategies are based on Microsoft products.

Cautions

- EDB Gruppen has a regional presence in Northern Europe, which can create support concerns in other areas targeted for expansion (such as North America).
- Users serving a large number of customers and/or having large billing batch cycles should scrutinize Xellent's billing scalability, because some customers have expressed concerns with product batch performance.
- The Xellent product lacks COTS maturity and implementation partners, and it is usually delivered as a leveraged product with a high level of customization.
- Reliance on Microsoft technology and the Dynamics AX ERP platform may make Xellent less attractive for clients with different technology preferences.

Gruppo Engineering

Strengths

- Gruppo Engineering's CIS product Net@Suite is built as a modular solution that is composed of two components Net@SIU, which addresses M2C needs, and Net@CRM, which addresses customer service back-office and front-office needs.
- Gruppo Engineering is the leading CIS product in the Italian market, and it has more than 200 clients (serving more than 17 million customers/meters).
- Net@Suite addresses CIS needs for multiple services, with particularly large installations in gas and water utilities (serving more than 30% of Italian municipal utilities).
- Net@Suite has evolved to support energy and utility market transformation (in Italy), including unbundling and the introduction of retail competition.

Cautions

- So far, Gruppo Engineering has been exclusively focused on the Italian utility market and its liberalization. It has not been proven in other national and regional energy markets.
- Net@Suite has not been implemented in many electric utilities (just 12% of installations). Electric utilities — particularly those operating in regulated markets or network companies operating in competitive markets — should scrutinize Net@Suite's service management functionality.



- Although the company has made significant R&D investments in the past several years, the level of investment made to address AMI and energy-efficiency support may not be adequate for markets focused on smart grid and AMI deployments.
- Net@Suite does not have proven scalability to meet Tier 1 company billing needs (based on the size of the largest batch cycle in production), although Gruppo Engineering has performed scalability testing in laboratory environments.

Ferranti Computer Systems

Strengths

- Ferranti's MEtering & COntract Management System (MECOMS) is designed to support customer care and the billing needs of companies having different roles (for example, merchant generators, the metering company and the network company). Ferranti offers different products (for example, electricity, water, gas and heat) in different markets (regulated and deregulated).
- MECOMS is built on top of the Microsoft ERP platform Dynamics AX and leverages its n-tier architecture.
- MECOMS is certified for Dynamics AX. Ferranti as a Microsoft Gold Certified Partner leverages the Microsoft Dynamics AX partner network to expand beyond its home market (Benelux).
- In addition to the usual CIS functional footprint (such as revenue management, customer management and service management), MECOMS provides reporting and performance management functionality using Microsoft PerformancePoint.

Cautions

- Ferranti's CIS solution has not been implemented outside its native Benelux energy and utility market.
- Some customers have reported concerns regarding MECOMS's usability, which are attributed to the complexity of the Microsoft Dynamics AX ERP environment.
- As a relative newcomer in the CIS product market, MECOMS is still going through initial product maturation.
- Exclusive dependence on Microsoft Dynamics AX makes MECOMS unattractive for utilities looking for a different ERP platform.

Hansen Technologies (HUB)

Strengths

- The Hansen Unified Billing (HUB) CIS product offers competitive pricing and fast implementations for smaller utilities that offer multiple commodities and communication services.
- Hansen offers HUB as a custom product (with client/server architecture deployed on Unix server and thin client on Windows), and as a platform for managed billing and customer care services (HUB Facility Management).



- Hansen has focused R&D on meeting scalability requirements arising from the current industry focus on AMI and smart metering deployments.
- HUB's ability to manage complex customer hierarchies makes the product fit for utilities focused on large commercial and industrial customers, distribution network companies, and small and midsize businesses.

Cautions

- Hansen HUB is focused on markets undergoing transformation, and it does not offer the customer service functionality needed by integrated utilities managing customers and delivery assets.
- Utilities operating in competitive energy markets requiring CRM functionality, such as customer acquisition and retention, should scrutinize HUB's customer care functionality.
- Hansen maintains a dual focus (outsourcing [Hub Facility Management] and billing products), creating a two-prong strategy, which is usually challenging for vendors to execute successfully.
- Hansen has not articulated an integration strategy or future product road map for its CIS product portfolio (HUB and Peace).

Hansen Technologies (Peace)

Strengths

- Hansen's CIS product Peace originated in a competitive retail market and has the capability to address advanced contestable market requirements (such as customer switching and profitability analysis).
- The Peace implementation at Xcel Energy has proved that the product can meet the scalability requirements needed for large integrated utilities.
- The Peace acquisition by Hansen Technologies has mitigated concerns about Peace, which were created by the prolonged search for a new owner after First Data decided to exit the CIS market.
- Some clients in Asia/Pacific have noticed improvement in product support since the Hansen acquisition.

Cautions

- Based on end-user feedback, utilities considering Peace deployments should scrutinize the product's online performance and usability.
- Hansen is actively seeking customer participation in its next product release (aka PeaceX), which prompted some customers' concern that PeaceX will be more akin to a "custom-built solution" fit to a particular customer's needs, rather than a COTS product.
- The previous owner's (First Data Utilities) focus on service offerings and revenue management resulted in inadequate R&D investments in integration with adjacent products and services, such as service order management, outage management and meter data management, which forced the product to fall behind leading competitors in those areas.



• Several Peace clients have informed Gartner that they are in the process of replacing or considering replacement of Peace software. Some of them started considering replacement before the Hansen acquisition.

Indra

Strengths

- Indra is a leading Spanish IT solution provider that offers consultancy services and systems developed for the energy and utility markets.
- Open Utilities Customer Management is a functionally rich product whose footprint extends into customer service, outage management and commodity management areas.
- According to clients, Indra's CIS has good usability and a familiar Microsoft Windows look-and-feel user interface.
- Indra has a large installed base in Spain, Latin America, Eastern Europe and Asia (almost 12% of the cumulative installed base of all rated vendors).

Cautions

- Out of the total number of bills produced by Indra's CIS clients, less than 1% is for customers in competitive energy retail markets. Thus, product capability has not been functionally proved for that segment.
- Most of Indra's utility clients still run Soluziona's legacy CIS product.
- Being part of an IT service company may affect future product direction and limit COTS focus by favoring corporate system integration business and BPO offerings.
- Indra does not have a presence in the North American utility market and is not currently focused on the North American utility market.

Nexant

Strengths

- Nexant's acquisition of Exelergy has removed some corporate and product viability concerns, as previous owner Brinvest did not maintain level of investment required to keep Nexant Revenue Manager competitive.
- In addition to its significant presence among North American retailers, Nexant Revenue Manager has achieved some traction among retailers in Western European competitive retail markets.
- Nexant Revenue Manager can be quickly deployed by new entrants in competitive energy markets, and it tends to result in lower customer service costs.
- The new Nexant offering, FlexRate, is addressing new functionality resulting from smart grid and energy technology consumerization trends.

Cautions

 Nexant's focus on competitive retail makes its Revenue Manager product inappropriate for regulated mass-market retail.



- Although Revenue Manager offers some CRM capabilities, it does not meet the full CRM needs of competitive retailers.
- Nexant Revenue Manager's scalability has not been proved in production and may become an issue if its current energy retail clients experience significant growth in their customer bases.
- A Nexant referenced customer has expressed concern with implementation service quality and responsiveness (implementation took place before the Nexant acquisition).

Oracle Utilities

Strengths

- Oracle Utilities has structured Customer Care and Billing (CC&B) as a series of modules

 most of which can be sold as stand-alone components or assembled into specific market segment solutions to address the needs of competitive retailers, fully integrated utilities, water utilities and others.
- CC&B can be integrated (leveraging Oracle Application Integration Architecture) with other Oracle products (both vertical and horizontal) to provide an extended environment that includes mobile workforce management, meter data management and CRM (Siebel)
- Due to its longevity in the CIS market, Oracle Utilities' CC&B has rich functionality and has successfully met requirements of various size companies in markets with different levels of contestability that provide various utility services (such as complex structure of water utilities in Europe).
- Oracle has proven performance in large Tier 1 energy companies and can address scalability with up to 550,000 billing services per batch cycle (currently in production).

Cautions

- Although Oracle offers applications that enable smart grid transformation; it was originally slow to articulate a holistic smart grid strategy with clear CIS implications.
- Being a part of an enterprise application vendor that is also a technology platform provider may, in the future, influence Oracle Utilities' technology independence in favor of "home-based" technology, thus affecting integration costs with non-Oracle-based environments. Users should monitor Oracle Partner Network (OPN) activities and involvement in open standards bodies.
- Oracle continues to have issues with overlapping products, product directions and partnerships particularly with Oracle horizontal products, which are partially addressing M2C and customer care needs in the utility space.
- Several Oracle Utilities' customers have reported that their CC&B implementation was longer than the average COTS CIS implementation (18 to 24 months). Because the CIS implementation project duration is not necessarily affected by the product, users should monitor the project scope and plan for the integration effort with additional applications (if integration is not offered out of box).



Strengths

- SAP is a large enterprise software vendor that leads in the CIS space with more than 600 utilities worldwide using its SAP IS-U/CR&B product (as reported by SAP). Because of its traditionally strong presence among large energy companies, SAP has the largest market share, defined by the aggregated number of end customers billed on its installations in production (450 million customers, compared with 127 million from its closest competitor). It has also signed the largest number of new contracts of all analyzed vendors (41, compared with 25 from its closest competitor) since the last Gartner CIS market assessment.
- Users looking for an integrated horizontal ERP solution and vertical billing solution may find the SAP offering conducive to their needs.
- SAP has put significant R&D effort into addressing CIS product integration with an AMI platform, and creating an off-the-shelf integration framework using Web services to support utility company needs for CIS and AMI integration.
- SAP has a well-developed network of implementation partners and technology product vendors that help cover the "white space" in the SAP utility offering.

Cautions

- Even though SAP has attracted a substantial number of implementation partners, the large numbers of concurrent implementations can put a strain on the SAP utility organization's ability to get close involvement and oversight of the implementation project, which can cause project budget overruns.
- SAP's utility Industry Value Network (IVN), which was announced in 2007, appears to be focused primarily on more-narrow initiatives, such as the AMI Lighthouse Council.
- Legacy SAP CIS call center users have expressed concern about product usability, which can negatively affect call center productivity — particularly call-handling time. SAP offers CRM as a means to mitigate IS-U/CR&B call center usability concerns.
- SAP CCS users often find access to technical support (both implementation and postimplementation services) challenging.

Ventyx

Strengths

- Ventyx is one of the early examples of a vendor that extended the traditional CIS footprint into the service delivery area, addressing the needs of the operations-excellence-driven North American market.
- Customer Suite has one of the fastest implementation records among the competing CIS products.
- After struggling for years through customizations and upgrades, Ventyx customers are now reporting satisfaction with the product meeting COTS requirements and simplified implementation and upgrade processes.

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SAP
• Ventyx Business Intelligence for Customer Suite provides visibility and insight into operational status on a day-to-day level and at a strategic trend-spotting level.

Cautions

- Customer Suite is not receiving marketing and R&D attention compared with other products and offerings from the Ventyx portfolio.
- Customer Suite continues to lack a global presence compared with other Ventyx products.
- Customer Suite has not been proved in a competitive retail setting, because more than 98% of its customers are public utilities or investor-owned utilities operating in regulated retail markets.
- Although Ventyx has component solutions in its product portfolio to address some AMI market needs, Customer Suite hasn't matched leading competitors' R&D investments to address AMI-driven requirements in the CIS area.

RECOMMENDED READING

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"Customer Service Provisioning Cost in Utility Industry"

"Energy Technology Consumerization: Impact on Utility OT and IT"

"Utility Consumer Survey: Energy Efficiency, Do They Care and Why?"

"Dataquest Insight: Utilities Industry Market Size and Forecast for Customer Information Systems, 2008-2013"

"Management Update: Top 10 Business Trends Impacting the Utility Industry in 2009"

"Management Update: Top 10 Technology Trends Impacting the Energy and Utility Industry in 2009"

"U.S. Stimulus Package to Jolt Intelligent Grid IT and Operational Technology Investments"

"Plug-In Hybrid Electric Vehicles: Not 'Plug and Play' for Electric Utilities"

"Dataquest Insight: BPO Trends in Utilities, 2008"

"Advanced Metering Infrastructure, Part 1: Business, Regulatory and Technical Considerations"

Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.



Evaluation Criteria Definitions

Ability to Execute

Product/Service: Core goods and services offered by the vendor that compete in/serve the defined market. This includes current product/service capabilities, quality, feature sets and skills, whether offered natively or through OEM agreements/partnerships as defined in the market definition and detailed in the subcriteria.

Overall Viability (Business Unit, Financial, Strategy, Organization): Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue investing in the product, to continue offering the product and to advance the state of the art within the organization's portfolio of products.

Sales Execution/Pricing: The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support and the overall effectiveness of the sales channel.

Market Responsiveness and Track Record: Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

Marketing Execution: The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This "mind share" can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.

Customer Experience: Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups and service-level agreements.

Operations: The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

Completeness of Vision

Market Understanding: Ability of the vendor to understand buyers' wants and needs, and to translate those into products and services. Vendors that show the highest degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

Marketing Strategy: A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the Web site, advertising, customer programs and positioning statements.

Sales Strategy: The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

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Offering (Product) Strategy: The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.

Business Model: The soundness and logic of the vendor's underlying business proposition.

Vertical/Industry Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical industries.

Innovation: Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

Geographic Strategy: The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography — either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

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Appendix P THE TAYLOR REACH GROUP INC. – IN PROVINCE CONTACT CENTRE STRATEGY

In Province Contact Centre Strategy Report

Prepared for:



Prepared By



May 8, 2009



Table of Contents

Objective	3
Deliverables	3
Background	3
Methodology	3
Assumptions & Key Load Volume Data	4
Organizational Structure:	5
Technology Infrastructure Model	8
Technologies Budget Model	10
Appendix A The Taylor Reach Group, Inc.	11
Appendix B Contact Centre Roles	12
Appendix C Erlang – A Unit of Traffic	15
Figure 1: Organization Diagram	6
Figure 2: Contact Center Architecture	9



In-Province Contact Centre Strategy Report

Terasen Gas ("Terasen") retained the services of The Taylor Reach Group, Inc., to assist in the development of an in-province call handling strategy. The Taylor Reach Group, Inc. has the knowledge, experience, resources and capabilities to complete this project for Terasen. More information regarding The Taylor Reach Group, Inc. can be found in Appendix A.

Objective

The project objective was to determine the scope and an estimated cost of providing the currently outsourced call center services at the same level of service via internal staff at two locations in British Columbia. This scope and preliminary costing is required for inclusion and submission to the regulatory authority by the end of May 2009.

Deliverables

The project deliverables are listed below:

- 1. Develop an organizational structure, organizational chart, key position inventory and staff ratios to support the call and contact volumes indicated,
- 2. A cost estimate to provide facilities and technologies to support all inbound call and contact activities,
- 3. Provide an inventory of technologies required, and estimated purchase and implementation cost, and an estimate of ongoing support costs related specifically to the technologies employed in call centers.

Background

Terasen provides service to approximately 930,000 residential and commercial customers and 2,000 industrial customers. Terasen outsources all of the "meter to cash" functions to a third party provider who supports the services through facilities in New Brunswick, Ontario, Oregon and Manila, Philippines.

Methodology

TRG assessed: the contact volumes from supplied historical records and patterns by channel (calls, emails, correspondence etc.), demand and load forecasting, and the current call/contact flow between IVR and agent handled calls

Weekly and daily call patterns were modeled using forecasted call and contact load. Then an industry accepted contact distribution model was used to calculate the number of calls by 30 minute day-part. Then employing an industry standard algorithm (Erlang) determined the number of Full Time Equivalents (FTEs) required for each half hour period over the expected operating hours of the centers. These FTE numbers per hour were then increased based on provisions for: level of occupancy, absenteeism, tardiness, lunches, breaks and work rules (vacation, flex time, sick leave etc.) provided from Terasen. Training for staff induction and as an on-going training was not added since there are not yet any estimates of what this may entail.



An organization structure was then developed using agent, team lead and supervisor ratios based upon the forecasted and required FTE's. Additional key functions and management for the two centers were added.

With the sizing completed, a draft of the technology requirements was constructed based on other installations of similar size and configurations and the desired capabilities and functionality. From this an initial high level budget was built employing industry knowledge and preliminary contact with vendors but without full user or design specifications.

Assumptions & Key Load Volume Data

The operating assumptions included that the calls would be answered by internal staff at two locations in British Columbia. The two center model was employed in order to provide redundancy for disaster recovery and business continuity purposes.

The volume of calls for March 2009 was used as the base data for load and staffing calculations. The results were then apportioned over the year using the monthly call volume distribution reported for the previous 12 months. The call volume for March 2009 was:

Customer			Outbound
Service	Collections	Emergency	collection
65,738	17,881	5,071	3,079



Organizational Structure:

In developing an organizational design for the new contact centre TRG and Terasen reviewed past call centres that Terasen had operated prior to outsourcing, as well as the volumes and contact types presently being serviced by the third party provider. Also reviewed were contact load volumes, growth forecasts and contact centre activities.

High level role descriptions for each of the key roles within the center were developed. These Role Descriptions are found in Appendix B.

The required number of full time equivalents (FTEs) and personnel required for each activity or position was calculated. These calculations were based upon: the forecasted demand volume, hours of operation, estimated handle time per contact type and service level performance target. This information was then assessed against the current Work Rules for Terasen.

Finally, the number of staff to team lead, to supervisor ratios was used to determine the number of leads, supervisors and manager positions that would be required. These determinations also considered that: as a two site model separate site managers and additional support staff would be required to ensure operation in an emergency. The support staff includes: analytical, knowledge management areas, training, and administration functions.

Staff Ratios and Assumptions

TRG then overlaid industry best practice related to staff ratios to develop the following staffing model;

Standard Ratios for CSR Teams: Team Member & Team Leads to Supervisor Ratio 10 to 1 Team Leads to Supervisor 2:1 Team Leads are working leads. Ratio of 6:1 Quality Assurance to Agents 1:100 Analyst/Scheduler 1:100 Each Site requires at least 1 Manager Supervisor to Manager Ratio 6:1 Shared Services incorporate functions that cross both sites, and all teams.



The table below shows a Staff Model by department/activity groupings.

Table 1: Staff Model

	Agents					
	(FTE)	Leads	Supervisors	Managers	Support	Total
Customer Service	102	17	11	1		131
Emergency	19	4	2			25
Credit & Collections	33	6	4	1		44
Shared Services			1	1		2
Admin & Reception					5	5
Clerical					2	2
Communications					2	2
Forecast/Scheduling					2	2
Quality Assurance					2	2
Training					2	2
HR Support (from Dept)					2	2
Technical (from Dept)					3	3
Site Manager Director				2		2
	154	27	18	5	20	224

The 154 agents are full time equivalents based on 1,950 hours per year. The recommended ratio of full time and part-time staff is 70% full time and 30% part time. This staff model was employed to develop the following organizational structure.







The organization includes Human Resource roles and functions in the contact centres that may be delivered through head office. In addition there are Information Technology roles (Network/Desktop Administrator, Application Analyst) in the contact centre that would report to IT. Both of these groups are expected to have a dotted line relationship to the Site Manager/Director.



Technology Infrastructure Model

In developing the technology costs associated with operating the contact centres, the first step was to identify an inventory of applicable technologies required. Based upon the technologies employed today at the third party provider and those technologies required to facilitate the effective attainment of the service levels and performance standards, the following technologies were identified:

Table 2: Technology 8	Definitions
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Technology	Definition
Switch/Contact Center	IP (Internet Protocol) Telephone system with full multi-channel (Voice, Email, Chat) Contact Centre capabilities. Including Automatic call/contact distribution, monitoring, reporting
Workforce Management	An application to manage staff scheduling, schedule adherence and workforce planning to ensure that the appropriate staff is scheduled to meet the expected contact volumes, at the expected handle time and meeting the desired service level performance standards
Quality Logging - Voice Mining	Application manages recording of agent activity, both the voice and screenshot level. The application supports the internal Quality Assurance program and can incorporate quality monitoring and assessment forms. Voice mining allows for key word information to be sourced from recorded calls that can be incorporated in QA programs. Support 'Voice of the Customer' programs.
IVR - Speech Enabled	Interactive Voice Response systems allow the caller to interact with the application by providing inputs. This technology will support both 'touch tone' (DTMF) and voice (spoken) inputs to direct the application. This application can stand alone or as an element in a contact centre switch. Typical application of this technology includes: current account balance, last payment date, etc.
IVR - Outbound	Application proactively calls a defined list and plays a pre- recorded message and allows the customer to interact with the system by pressing a number to be connected with the contact centre and/or to record the customer's response to questions such as "when will you pay this charge?" This application can stand alone or as an element in a contact centre switch.
Email, Chat & Knowledge Management	Application manages customer interactions through non voice channels of Email and interactive Chat. The knowledgebase catalogues and manages knowledge within the organization. The application interacts with the switch.
Dialler	Predictive diallers dial in advance of an outbound agent being available (based upon an algorithm). This technology can dramatically improve outbound calling efficiency. This application can stand alone or as an element in a contact centre switch.
Reader Boards or Displays	This equipment and technology facilitates effective communication of real time contact centre performance information with the staff and management in the centre.



The following diagram illustrates a 'high level' generic server configuration based on two location contact center architecture.



Figure 2: Contact Center Architecture

PSTN

The above model includes failover to the public service telephone network (PSTN). It incorporates partial redundancy (dual connectivity between sites (likely MPLS and T3) and Contact Center Manager (CC Mgr) servers. Some of the applications are also redundant (IVR, CTI etc.).

This model provides a reasonable level of protection but it is not a fully redundant model. As this model employs 'server' based architecture, redundancy requires N + N, or the number of servers required to provide service must be replicated on a one for one basis. Different telephony suppliers provide different configurations and redundancy. For instance N+1 (number of units plus one) redundancy model can reduce the costs and increase the survivability of a center.



Technologies Budget Model

TRG extrapolated the architecture above (Figure 2: Contact Center Architecture) into the following table employing industry cost estimates for Tier 1 vendors.

It should be noted that there is a high degree of competition between vendors in each of the equipment segments and acquisition of this equipment lends itself well to a formal RFP process.

This pricing data was broken down to isolate Equipment Costs, Software Costs, and Implementation/Professional Service costs as well as ongoing Maintenance costs and upgrade costs (based upon 2 upgrades over 5 years).

		Purchase- Im	plementation		On-Going 5 Years			
Equipment	Budget	Hardware	Software	Professional Services	Maintenance	Upgrades	Total	
Switch/Contact Center	\$912,338	\$241,900	\$546,184	\$124,254	\$202,615	\$39,068	\$1,154,021	
Workforce Mgt.	\$300,000	\$105,000	\$105,000	\$90,000	\$115,500	\$20,000	\$435,500	
Quality Logging - Voice Mining	\$225,000	\$78,750	\$78,750	\$67,500	\$86,625	\$16,000	\$327,625	
IVR - Outbound	\$80,000	\$30,000	\$30,000	\$20,000	\$33,000	\$8,000	\$121,000	
Email, Chat & Knowledge Mgmt	\$340,031	\$27,000	\$248,031	\$65,000	\$13,500	\$16,000	\$369,531	
Dialler	\$175,000	\$55,000	\$85,000	\$35,000	\$27,500	\$10,000	\$212,500	
Reader Boards or Displays	\$125,000	\$40,000	\$65,000	\$20,000	\$20,000	\$10,000	\$155,000	
Total	\$2,157,369	\$577,650	\$1,157,965	\$421,754	\$498,740	\$119,068	\$2,775,177	
Contingency 20%	\$431,474	\$0	\$0	\$0	\$0	\$0	\$431,474	
Grand Total	\$2,588,843	\$577,650	\$1,157,965	\$421,754	\$498,740	\$119,068	\$3,206,651	

Table 3 Equipment Budget (US \$)

Enhanced IVR and self service opportunities have not been factored into the centre efficiency or related staffing calculations. These capabilities, however, have been included in the cost budget.



Appendix A The Taylor Reach Group, Inc.

Established in 2003, The Taylor Reach Group, Inc. (TRG) is a call and contact centre consultancy headquartered in Toronto, with offices in Atlanta and Sydney Australia. TRG has assisted hundreds of organizations improve the operating effectiveness and efficiency of their call, contact centre and customer facing infrastructure.

Today TRG designed operational models are employed in contact centres that represent more than 14,000 agent desktops globally. TRG has assisted organizations in a variety of industries such as Mercedes-Benz USA, Habitat for Humanity International, Republic Services, SNC Lavalin, TD Waterhouse and Foresters.

The principals of TRG possess more than 100 years of senior contact center operational management experience. All TRG possess more than 15 years of senior call/contact center experience.

For complete credentials please see our website at: <u>www.thetaylorreachgroup.com</u>



Appendix B Contact Centre Roles

Administrative Assistant

Performs a variety of administrative functions. Schedules appointments, gives information to callers, and takes meeting minutes. Composes memos, transcribes notes, and researches and creates presentations. Generates reports, handles multiple projects, and prepares and monitors invoices and expense reports, handles confidential and staff issues.

Call Center Representative (Inbound or Outbound)

Responsible for making or taking calls to or from clients in a structured environment. Provides customer service function and promotes or sells products and services of company and or initiates other conversation types.

Call Center Supervisor

Supervises employees who make or receive telephone calls from customers or potential customers. Responsible for the daily activity of call center policies and procedures. Ensures quotas for agent adherence, attendance, service volume and timeliness are met. Responsible for meeting call center operational standards, maintaining employee sales and service levels, improving quality service, preparing reports, keeping equipment operating, maintaining professional and technical knowledge, and accomplishing organization goals, hiring and staff selection.

Call Center Team Lead

Supervises small group of employees who make or receive telephone calls from customers or potential customers. Responsible for some coaching and direction about call center policies and procedures. Oversees agent and team adherence, attendance, service volume and timeliness are met. Responsible for meeting team operational standards, maintaining employee sales and service levels, maintaining quality service, notifying supervisors or management about equipment issues, maintaining professional and technical knowledge, and accomplishing organization goals.

Analyst Call Center Traffic and Scheduling, Communications

Analyzes call center volume, productivity, and patterns to optimize staffing levels. Schedules call center employees to ensure customer satisfaction. Co-ordinates the distribution of work tasks to support representatives. Monitors incoming call volumes and ensures even distribution among representatives dependent upon workload, determines time sensitivity of requests to ensure customer satisfaction. Responsible for keeping running and distribution of a variety of call center reports to people both within and outside of the centre. Keeps and maintains current any knowledge base, database as is required. Typically reports to a supervisor or manager.



Director

Plans and directs all aspects of an organization's call center policies, objectives, and initiatives.

Manager (Inbound or Outbound)

Manages and directs all aspects of outbound call center operations. Implements and reviews call center policies and procedures. Directs, supervises, trains, and develops representatives; resolves conflicts; ensures work product consistently meets established standards; and takes required corrective/developmental action to remedy deficiencies.

Operations Clerk

Performs administrative tasks to support the operations group.

Quality Analyst

Screens incoming and outgoing calls to ensure quality, customer service, and adherence to the policies and procedures of the organization. Provides feedback to assist in the creation of performance improvement goals and the development of training programs.

Trainer

Responsible for the professional development of the customer service staff. Designs and implements programs to improve performance and efficiency. Maintains the currency and accuracy of the training and coaching materials and any associated data references. Develops and maintains records of students and their knowledge retention and performance. Works closely with the Quality Assurance group. Reports to a manager or supervisor.

HR Coordinator

Provides support in human resource functions which may include recruitment, employment, personnel records, employee and/or labour relations, job evaluation, compensation management, benefits administration, organization development and training. Relies on instructions and established guidelines to perform the functions of the job. Works under immediate supervision. Typically reports to a supervisor or manager either in a center or to the HR Department.

Network/Desktop Administrator

Installs new software releases, system upgrades and installs patches and resolves software related problems. Performs system backups and recovery. Maintains data files and monitors system configuration to ensure data integrity. Responsible for maintaining desktop systems and other equipment in the center in working order. Works under immediate supervision. Reports to a supervisor or manager

Applications Analyst

In-house expert on applicable technologies. Can install patches and resolve software related problems, perform system backups and recovery. Maintains



data files and monitors system configuration to ensure data integrity. Can change configurations; add users, moves, changes as directed by the center management. Works under immediate supervision. Reports to a supervisor or manager either in the center or IT department.



Appendix C ERLANG - A UNIT OF TRAFFIC

An Erlang is a unit of telecommunications traffic measurement. Strictly speaking, an Erlang represents the continuous use of one voice path. In practice, it is used to describe the total traffic volume of one hour.

For example, if a group of users made 30 calls in one hour, and each call had an average call duration of 5 minutes, then the number of Erlangs this represents is worked out as follows:

Minutes of traffic in the hour = number of calls x duration Minutes of traffic in the hour = 30×5 Minutes of traffic in the hour = 150Hours of traffic in the hour = 150 / 60Hours of traffic in the hour = 2.5Traffic figure = 2.5 Erlangs

Erlang traffic measurements are made in order to help telecommunications network designers understand traffic patterns within their voice networks. This is essential if they are to successfully design their network topology and establish the necessary trunk group sizes.

Erlang traffic measurements or estimates can be used to work out how many lines are required between a telephone system and a central office (PSTN exchange lines), or between multiple network locations.

ERLANG TRAFFIC MODELS

Several traffic models exist which share their name with the Erlang unit of traffic. They are formulae which can be used to estimate the number of lines required in a network, or to a central office (PSTN exchange lines). A formula also exists to model queuing situations, and lends itself well to estimating the agent staffing requirements of call centers.

The main Erlang traffic models are listed below:

Erlang B

This is the most commonly used traffic model, and is used to work out how many lines are required if the traffic figure (in Erlangs) during the busiest hour is known. The model assumes that all blocked calls are immediately cleared.

Extended Erlang B

This model is similar to Erlang B, but takes into account that a percentage of calls are immediately represented to the system if they encounter blocking (a busy signal). The retry percentage can be specified.

Erlang C

This model assumes that all blocked calls stay in the system until they can be handled. This model can be applied to the design of call center staffing arrangements where, if calls cannot be immediately answered, they enter a queue.



Calculations in this document were based on the Erlang B and Erlang C traffic models to estimate how many agents are needed in a call centre for each day part.

Appendix Q THE TAYLOR REACH GROUP INC. – SENSITIVITY ANALYSIS

Sensitivity Analysis



Prepared by: The Taylor Reach Group, Inc.

August 2009

Overview

In developing and assessing the Terasen Gas contact centre model it was essential to examine the sensitivity of this model against a number of scenarios and variables that could impact call centre operation in the longer term. Specifically Terasen wanted to examine the impact of three primary sets of variables. These variables are:

- 1. Likely adoption rates of emerging and alternate contact centre channels over the next 3 to 5 years.
- 2. The impact on contact centre voice call volumes and staffing levels based the increased adoption and utilization of alternate contact channels of self service IVR, Email and Chat.
- 3. The impact on the contact centre of alternate Service Level standards

Current utilization of these contact centre channels has been measured by a number of sources including Contact Babel who in their 2008 US Contact Center Operational Review identified contact centre adoption levels as illustrated on the chart below.



Channel Distribution

Contact Babel further identified year over year growth rates of 36% for email utilization and 100% for chat and stated that based on their research 48% of all call transactions across a number of verticals were suitable for IVR self service. According to Research & Markets¹, 90% of large organizations have already deployed IVR technology.

Self service was also identified in the Global Call Center Benchmarking Report -- issued annually by Dimension Data, a Hauppauge, N.Y.-based IT services firm where 22.6% of respondents identified self service as a top trend in contact centre operations.

¹ North American Systems Market 2007

Approach

The approach employed to gain an understanding of the impact of the above variables was to examine industry research and analyze the impact of channel adoption on Terasen contact centre staffing and labour costs. The Taylor Reach Group, Inc. has examined the impact of a shift of 100,000 live voice calls to email, IVR and chat. The 100,000 contacts reflect a shift of 9.7% of the base contact centre call volume from live voice calls to alternate service channels.

Today Terasen gas employs IVR technology to process approximately 280,000 calls per year. The addition of a further 100,000 would equate to approximately 26.9% of all contacts being processed by IVR.

The effect of all three technologies is to increase agent efficiency and to reduce the amount of effort required to serve a customer versus using traditional live agent contact. In IVR the live agent is eliminated as compared to both Chat and Email where the agent remains involved but is more efficient.

This document has specifically examined the impact of migration of these volumes to new channels. It would be expected that customer adoption of these new channels will be a function of the customer demographic (younger customers tend to be more technology tolerant than older customers) as well as the manner in which these communication options are presented by Terasen to their customers.

Due to this fact it is difficult to predict what the actual adoption rate would be for Terasen. Reasonable adoption level ceilings for the near (one to three year) term reflect the volumes being evaluated:

- IVR increasing by 9.7% to 26.9%,
- Email increasing from 2.9% of current contacts to 12.6%,
- Chat is a new technology that has not been previously deployed by Terasen as such all of the volume shall be new and it represents 9.7% of total contacts.

In total the channels outlined in this report are expected to represent 49.2% of all Terasen contact volume.

Findings

IVR

The projected impact of shifting volume from live agents to IVR resulted in the volume and distribution shown on the table below:

IVR Impact	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Handled by IVR	28,944	24,256	27,643	25,953	22,554	24,457	18,783	20,226	21,332	24,235	21,267	21,156	280,806
Additional Calls	8,079	7,393	8,579	10,970	9,485	8,874	8,442	7,162	8,476	8,890	6,969	6,681	100,000
Total Calls IVR	37,023	31,649	36,222	36,923	32,039	33,331	27,225	27,388	29,808	33,125	28,236	27,837	380,806

This shift requires a 30% increase in the number IVR ports employed to support the additional traffic. By shifting the contact volume to the IVR and eliminating the live agent element an estimated 18 Full Time Equivalents (FTE's) could be removed from the contact centre or

deployed on other contact centre activities. With this change alone the estimated number of FTE's required to handle calls in the centre would be reduced from 187 to 169.

Email and Chat

Similar findings were evident when Email and Chat were assessed. As stated above the Email and chat activities still require agent intervention though the agents would be more productive in this environment than in live voice call handling mode. Of course the level of proficiency and degree of efficiency attained by an agent will improve over time with experience and will vary based upon the individual skills and competencies. TRG has employed a proficiency level that would be expected to be achieved after one year. The tables below show this impact.

	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Current Emails	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	2,500	30,000
Additional Emails	8,079	7,393	8,579	10,970	9,485	8,874	8,442	7,162	8,476	8,890	6,969	6,681	100,000
Total Emails	10,579	9,893	11,079	13,470	11,985	11,374	10,942	9,662	10,976	11,390	9,469	9,181	130,000
Additional Chats	8,079	7,393	8,579	10,970	9,485	8,874	8,442	7,162	8,476	8,890	6,969	6,681	100,000

Email	Production	Effort
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When these changes in contact distribution are summarized from a required labour perspective the following results are achieved:

	FTE Impact by Channel						
	IVR	Chat	Email				
FTEs /mth Base	187	187	187				
FTEs /mth New	169	178	175				
FTE Reduction	18	9	12				
Labour Reduction @ \$50K/Yr	\$896,840	\$450,000	\$600,000				

The labour impact is significant in total, reflecting \$1.95 million dollars assuming equal participation for each alternate communication channel.

Service Level Options

When we examine the impact of changes in the service level (the percentage of calls answered within a predetermined second threshold) being delivered by the contact center, we see nominal shifts in labour efficiency and utilization. For this exercise we looked at three service level models:

- 80/20 Answering 80% of all incoming calls within 20 seconds,
- 80/30 Answering 80% of all incoming calls within 30 seconds,
- 75/30 Answering 75% of all incoming calls within 30 seconds,
- 70/40 Answering 70% of all incoming calls within 40 seconds,

The service level now being delivered by Terasen gas is 75/30. This represents 187 FTEs in terms of staff required to manage the volume of calls at the proscribed service level. Moving to a 70/40 service level will increase the average speed of answer and average wait times for incoming callers and as such will require slightly less staff to attain the service level.

The number of FTE's required to support a 70/40 service level is 182 a reduction of 5 FTE's from the 75/30 service level.

An 80/30 service level will nominally improve speed of answer and wait times, while slightly increasing labour to 190 FTE's.

Moving to an 80/20 service level will reduce the average speed of answer and average wait times for incoming callers and will slightly increase the FTE's required to 192.

The impact of these service level adjustments sees a labour savings or staff redeployment opportunity representing approximately \$233,750 per annum at a 70/40 service level and a staffing cost increase of \$150,000 per annum at 80/30 service level to \$261,800 per annum by moving to an 80/20 service level.

Summary

The use of alternate communication channels will improve customer accessibility and also serves to reduce the total labour effort required to serve the contact centre load at the desired service level. The resultant efficiency can be reflected in terms of labour or headcount reduction, redeploying existing staff to other activities or by providing agents additional time on each contact to ensure that the customers inquiry has been completely resolved. The choice belongs to the organization. First Contact Resolution (FCR) however is one of the key performance metrics in contact centres and can be an attractive option for organizations that wish to improve the customer experience while retaining the ability to absorb increases and/or spikes on contact volume.

Appendix R THE TAYLOR REACH GROUP INC. – MARKET LOCATION REPORT

Special Report

Market Location Report



Prepared by: The Taylor Reach Group, Inc.

August 2009

Introduction

As a part of Terasen Gas' effort to repatriate contact centres a site selection exercise was conducted to find and assess the availability of suitable potential jurisdictions for the contact centres across Western Canada.

The Taylor Reach Group, Inc. (TRG), a call and contact center consulting firm, was engaged to do this work for Terasen. The study and search was done blind so as to remove any bias or conflicts in the response and by the responding jurisdictions.

TRG contacted provincial, industry and economic development agencies in each of the four western provinces Manitoba, Saskatchewan, Alberta and British Columbia.

Scope of Work and Methodology:

The scope of work for this initiative was to identify and assess potential contact centre locations in Western Canada, specifically in Manitoba, Saskatchewan, Alberta and British Columbia.

TRG contacted government agencies, contact centre associations and posted information requests on popular contact centre related discussion groups and websites. TRG identified the following list of potential contact centre locations:

- British Columbia
- Manitoba
- Saskatchewan
- Alberta

Each jurisdiction was interviewed over the telephone and asked which markets, towns or locations might be appropriate for a contact centre. The locations identified were asked to respond to a blind survey articulating their interest and capability to support a call centre in their area. The purpose of the blind survey was to remove any Company bias or conflicts.

In each interview the requirements identified for this assessment were: high available workforce exhibited by the employment rate in the local areas; accessibility; call centre saturation etc.

	TRG Market Assessment	Evaluation Score	Score	Weighting Balanced
ID #	Categories			
1	Population local	50000 +	2	8
		20,000 - 50,000	3	
		7500 to 20000	1	
		<7500	0	
2	Population 45 minute draw area			Informational
3	Workforce Local	25000 +	3	10
		10,000 - 25,000	2	
		4000 to 10000	1	
		<4000	0	
4	Workforce 45 minute draw area			Informational

	TRG Market Assessment	Evaluation Score	Score	Weighting Balanced
5	Unemployment %	<4%	0	15
		4.1% - 6%	1	
		6.1 - 9%	2	
		9.1% +	4	
	Unemployed Population	<3000		Informational
		3000+	2	
7	Under-Employment %			Informational
8	Under-Employed Population			Informational
9	Participation Level	<70%	1	2
10	Crime Rate			Informational
11	College University proximity	local presence	1	2
12	Military Base proximity	local presence	2	2
13	Other Call Centers in market	1 or less		Informational
14	# Type of Centers	1 or less		Informational
15	Inbound Customer Service	1 or less	1	2
16	Inbound Technical Support	1 or less		Informational
17	Inbound Other	1 or less		Informational
18	Outbound Sales	1 or less		Informational
19	Outbound Collections	1 or less		Informational
20	Outbound Research	1 or less		Informational
21	Total Call Center Seats			Informational
22	Call Center Saturation	<1%	4	20
		1.1% to 3%	2	
		3.1-5%	1	
		5.1 - 7.5%	0	
		7.6% +	-5	
23	Proximity to airport	< 45 minutes	1	2
24	Proximity to town	< 15 minutes	1	1
25	Available Real Estate	Yes- appropriate	1	4
26	Estimated Operating Rent			Informational
	Estimated Leasehold			
27	Improvements		· ·	Informational
28	Build to Suit Options		1	5
29	Bilingualism %	10%+		Informational
30	Average Income		1	Informational
31	Average income	<\$60000	1	1 Informational
32	Average house price	<\$250000	1	Informational
33	Cuplity of Life	Post secondary over 25%	1	Informational
34	Quality of Life	Vaa	1	informational
30	Public ITalisi	res	1	Informational
30	Infrastructure Electricity			Informational
20	Infrastructure Telecom			Informational
30	Distance to CO	< 2 km	^	o
10	Sovere Weather Occurrences		<u> </u>	0
40		Past year 1		<u> </u>
		rast year 1	1	
		pasi year it	- 1	

TRG Market Assessment		Evaluation Score	Score	Weighting Balanced
41	Available Incentives	Yes	2	3
42	Environmental Incentive	Yes	1	1
43	Starting Call Center Wage	<\$11	2	5
		\$11- \$14	1	
		\$14+	0	
44	Median Wage Customer Service	<\$11	2	5
		\$11- \$14	1	
		\$14+	0	

The above table reflects a possible maximum score of 100 points. These points can be broadly broken down into Market Viability and Contact Centre Viability as illustrated in the table below:

Attributes of Market Viability	Points
Population local	8
Workforce Local	10
Unemployment %	15
Participation Level	2
College University proximity	2
Military Base proximity	2
Proximity to airport	2
Proximity to town	1
Average Income	1
Level of Education (% of Pop)	1
Public Transit	1
Environmental Incentive	1
Available Real Estate	4
Build to Suit Options	5
Market Viability Score	55
Contact Centre Viability	Points
Inbound Customer Service	2
Call Center Saturation	20
Distance to Central Office (Telco)	8
Severe Weather Occurrences	2
Available Incentives	3
Starting Call Center Wage ¹	5
Median Wage Customer Service ²	5
Contact Centre Viability Score	45

To the above scoring Terasen will add Terasen specific location considerations such as labour strategy, availability of Terasen owned land, data network 'footprint', accessibility etc.

 ¹ Wage data provided by jurisdictions
² Wage data provided by jurisdictions

Lastly wage rates were gathered independently of the data gathered from the economic development offices. This was to provide comparison and independent snapshot and validation of the key markets.

Findings:

Saskatchewan

In discussion with the government agencies in Saskatchewan low unemployment (approximately 4%), a lack of suitable sites and lack of a suitable workforce made Saskatchewan an unattractive potential location.

Alberta

Unemployment levels were also a prime influencer in discounting Alberta also. Economic Development agencies and industry associations suggested that it was very difficult to recruit staff, and the unemployment level was cited at 4.1%.

Manitoba

The Economic Development agency forwarded details to a number of potential markets. Identified markets included potential locations in Winnipeg and other sites in Brandon.

British Columbia

The Economic Development agency (LinxBC) forwarded details to a number of potential sites locations.

From this initial discussion 18 markets were invited to participate in a detailed survey and market assessment as the next step of this process. These markets included:

Delta, BC Burnaby, BC Coquitlam, BC Kelowna, BC Richmond, BC Victoria, BC Surrey, BC Maple Ridge, BC Kitimat, BC Winnipeg, MB Kamloops, BC Penticton, BC

Nanaimo, BC Port Alberni, BC Prince George, BC Vernon, BC Langley, BC Brandon, MB

Below is the Site Selection Matrix that was sent to interested jurisdictions.

TRG Market Assessment						
ID#	Instructions					
All	Please complete the tab labelled Matrix. Provide the most current information available and note the source and recency of the information in the Comments column. The anticipated centers will employ 280 and 110 staff respectively.					
6, 8	Please indicate the number of individuals in this category within the 45 minute draw area					
13	Indicate the identity of other major contact centers already established within the market draw area.					
14	Indicate the number and type (inbound, outbound, corporate, outsourced, customer service, technical support/help desk etc.) of Centre within the 45 minute draw area					

15	Indicate the number of staff (FTE's) employed providing inbound customer service (corporate and outsourcer) within the 45 minute draw area.		
16	Indicate the number of staff (FTE's) employed providing inbound technical support/help desk services (corporate and outsourcer) within the 45 minute draw area.		
17	Indicate the number of staff (FTE's) employed providing any other inbound contact center services (corporate and outsourcer) within the 45 minute draw area.		
18	Indicate the number of staff (FTE's) employed providing outbound sales contact center services (corporate and outsourcer) within the 45 minute draw area.		
19	Indicate the number of staff (FTE's) employed providing outbound collections contact center services (corporate and outsourcer) within the 45 minute draw area.		
20	Indicate the number of staff (FTE's) employed providing outbound research contact center services (corporate and outsourcer) within the 45 minute draw area.		
21	Identify the total number of contact center 'seats' and estimated FTE's within the 45 minute draw area.		
22	Provide contact center saturation percentage; total contact center FTE's as a percentage of the workforce		
25	Identify up to 3 buildings within the market that you believe are suitable to operation of a contact center. The desired footprints are 51,000 sq ft and 21,000 sq ft, open built out. Identify age of building, handicap access and whether the building in sprinklered. Attach floor plans, photos for each site.		
26	Identify the operating rent for each of the properties identified in 25 above. Also identify if the building is also available for purchase.		
28	Identify up to 3 properties that are available for a build to suit option and identify the costs of land.		
29	Indentify the percentage of the population that is bilingual (English/X) and what the second language is.		
30	Identify change in Population in the past 10 years		
36 - 38	Identify providers of infrastructure services		
39	Identify the distance for each building and/or site identified in 25 and 28 and the nearest Telco Central Office. Also identify the distance to the next nearest Telco Central Office.		
40	Identify the number and types of severe weather in the past 12 months that have cause a power and/or telephone service outage in the market area.		
41	Identify any incentives (Federal, Provincial, Municipal- Training, Hiring, Capital, Tax etc.) available. Provide details		
42	Identify any environmental incentives or benefits associated with existing available real estate.		
43	Identify the starting wage for centers referenced in 15 above		
44	Identify median wage for centers referred in 15 above.		

TRG received 15 responses from jurisdictions interested in having centers. These are listed below:

Burnaby, Coquitlam, Kamloops, Kelowna, Kitimat, Maple Ridge, Nanaimo Penticton. Port Alberni, Prince George, Richmond Surrey, Vernon, Victoria, Winnipeg,

Langley declined to respond. Delta and Brandon also did not did not submit a response. Numerous calls and emails were placed to follow up on the status of the submissions and to ensure that adequate detail was provided.

In some cases the level of interest or lack of interest was reflected in the quality of the response received.

Assessment

Wage comparative data was sourced for a number of communities based upon the following job description:

Customer Service Representative II

Processes orders, prepares correspondence, and fulfills customer needs to ensure customer satisfaction. Requires a high school diploma or equivalent and 2-5 years of experience in the field or in a related area. Familiar with standard concepts, practices, and procedures within a particular field. Relies on limited experience and judgment to plan and accomplish goals. Performs a variety of tasks. Works under general supervision; typically reports to a supervisor or manager. A certain degree of creativity and latitude is required.

This resulted in the wages illustrated on the table below³:

Customer Service Representative II	25th%ile	Median	75th%ile
British Columbia Vancouver	\$35,474	\$39,972	\$46,034
British Columbia Victoria	\$33,782	\$38,066	\$43,839
Manitoba Winnipeg	\$30,985	\$34,913	\$40,208
Canada	\$32,021	\$36,081	\$41,553

It should be pointed out that: 1) these wages are based upon a self reporting process and are not always indicative of current market wages and, 2) that these positions are not based upon either company managed or Utility contact centres or a unionized workforce. When benchmark data is examined we note that average unionized contact centre agents in Western Canada receive \$21.74⁴ per hour or \$42,432 per annum.

Jurisdiction responses were compared against the defined scoring matrix described in the Methodology description.

³ Source MySalary.com

⁴ Contact Centres in Canada 2007, published by Contact Centre Canada

The assessment out of 100 possible points is shown below for the final rankings for each of the potential markets locations:



As the chart illustrates Vernon had the highest score achieving 87.3 out of a possible 100 points.

Overall smaller markets scored higher than big markets due to the unemployment rate as based on their population. On the other hand bigger markets tended to have a larger available number of unemployed. Both these factors must be reviewed together in determining what size of centre is appropriate in which markets.

The submissions received were then assessed against the two contact centres sizes (21,000 sq. ft. and 51,000 sq. ft.) and factoring for employable population the top large markets are shown in yellow and the small market ones are highlighted in green.

This results in the following two top 3 short lists of markets before including Terasen's specific location considerations:

Small Centre

- 1. Vernon
- 2. Prince George
- 3. Port Alberni

Large Centre

- 1. Surrey
- 2. Winnipeg
- 3. Maple Ridge

Summary

The results of this study and market assessment provide clear alternatives by market for Terasen to apply in the next step of the site selection for the new contact centres.

Appendix S THE TAYLOR REACH GROUP INC. – TURNKEY CONTACT CENTRE STRATEGY REPORT


Turnkey Contact Centre Search Report

Prepared for

Terasen Gas Inc.

July 21, 2009



Terasen Gas Inc.

Turnkey Contact Centre Search Report

July 21, 2009

Background:

As a part of Terasen Gas's effort to repatriate contact centres a site selection exercise was conducted to find and assess available 'Turn-Key' contact centres across different jurisdictions in Western Canada.

A 'Turn-Key' contact centre can be defined as a former operating contact centre that is no longer in operation; and where the space is available with contact centre technology, equipment and/or furniture. The attractiveness in 'Turn-Key' contact centres is the possibility of locating a similar centre to that desired by Terasen Gas, which offers similar technology, equipment and furniture as that desired by Terasen Gas which can be acquired, through purchase or lease, at a cost significantly below the cost to Terasen to outfit and equip a new centre.

The Taylor Reach Group, Inc. (TRG), a call and contact center consulting firm, was engaged to do this work for Terasen. The study and search was done blind so as to remove any Company bias or conflicts in the responses or by the responding jurisdictions.

Scope of Work and Methodology:

The scope of work for this initiative was to identify and assess potential 'Turn-Key' centres in Western Canada.

TRG contacted government agencies, contact centre associations and posted information requests on popular contact centre related discussion groups and sites. TRG identified the following list of potential 'Turn Key' centre locations:

- British Columbia
- Manitoba
- Saskatchewan
- Alberta

Each jurisdiction was either sent or was asked in a telephone interview what Turn-Key contact centre locations were known to be available in their areas and what infrastructure was available to support call centre activities.

Requirements:

The requirements identified for this assessment were:

- high available workforce exhibited by the employment rate in the local areas
- correctly sized facility for call and contact centre (21,000 sq ft and/or 51,000 sq ft)
- modern contact centre technology well within its useful life and
- technology licences could be transferred to a new owner.



Findings:

Saskatchewan

In discussion with the government agencies in Saskatchewan low unemployment (approximately 4%), a lack of suitable sites and lack of a suitable workforce made Saskatchewan an unattractive potential location.

Conclusion: Saskatchewan does not offer any appropriate turn-key locations for consideration.

Alberta

Unemployment levels were also a prime influencer in discounting Alberta. Economic Development agencies and industry associations suggested that it was very difficult to recruit staff, and the unemployment level was cited at 4.1%.

Conclusion: Alberta does not offer any appropriate turn-key locations for consideration.

Manitoba

Manitoba identified a number of potential 'Turn Key' centres. These potential centres included:

- Winnipeg:
 - o EDS,
 - National Leasing
 - o Convergys
 - o Manitoba Hydro
 - CUETS
- Brandon:
 - o Convergys

The Winnipeg centres identified were all previous contact centre locations that were available as built out space, but without technologies. Some of these locations also were smaller than desired (below the 21,000 sq ft minimum).

Conclusion: If an out of province centre is preferred there are potential sites in Manitoba that could be considered.

British Columbia

Potential 'Turn Key' locations in British Columbia included:

- Lower Mainland:
 - o 1-800-Got-Junk
 - o EBay
 - o NCO
- Vernon:
 - o Sutherland
- Prince George
 - o ACS

TRG held numerous discussions with eBay about their site. While suitable space was available and there was potentially available technology, the technologies did not match all of the Terasen requirements. Additionally eBay required negotiations to begin and be completed in a very short period (before August 1st). This timeline did not afford sufficient time for Terasen to complete the filing process.



The table below provides a summary of the specific sites: attributes and concerns:

in BC	Size	Equipment	Concerns	
Lower Mainland:				
1-800-Got-Junk	4,000 sq ft.,	Workstations	No technology available Immediate Occupancy desired	
EBay	3 floors 28,000, 45,000 and 47,000 sq. ft. respectively,	Avaya Switch, IVR, Witness Recorder, workstations, Back up Generator	 No WFM, Chat, Email. Technolog being removed effective 6/19/09. Switch being removed 8/7/09. Relocating Technology to Salt La City- no fire sale opportunity. Negotiations would need to start immediately (6/19/09) Immediate occupancy desired. Se equipment remove dates. 	
NCO		200 agent positions, workstations, back up power	No technology available Immediate Occupancy desired	
Vernon:				
Sutherland	30,000 sq ft.,	Workstations	No technology available	
Prince George				
ACS		200 agent positions,	Poor layout, No technology available Immediate Occupancy desired	

Finally a number of sites were proposed by BC that are too small to accommodate the requirements of Terasen Gas. Other BC sites did not offer technologies that matched specifically or wholly with those of Terasen Gas. Lastly there was a consistent desire for these sites to be occupied in the immediate or near term and none of the potential sites offered 'fire sale' pricing for suitable technologies.

Summary and Conclusions

Tumplease Contras

The objective of this exercise was to research the potential jurisdictions and identify if there were locations that matched the Terasen Gas requirements in terms of space, layout and available technologies. TRG held numerous telephone conversations, exchanges tens of emails and specifically evaluated almost a dozen locations.

Alberta:	Low available labour as unemployment level was cited at 4.1%
	and few if any sites.
Manitoba:	Some locations without technology, most below the minimum size.
Saskatchewan:	No locations suitable identified, low unemployment
British Columbia:	A few locations without technology, where technology existing the
	timeline for decision was too short and the technology fit was
	limited. Some locations were too small.

None of the jurisdictions reviewed and researched provide a good fit with the Terasen requirements.

Appendix T TERASEN GAS INC. – REQUEST FOR QUOTATION – CONTACT CENTRE TECHNOLOGIES

REQUEST FOR QUOTATION

Contact Centre Technologies: Telephony, ACD and Switch

REFERENCE: RFQ09-001



Table of Contents

Part 1		Quotation Instructions to Bidders
Part 2		Scope of Project
Part 3		Bidder's Quotation
	Appendix "A"	Requirements
	Appendix "B"	Quotation Qualification Questionaire
	Appendix "C"	Interface Specifications
	Appendix "D"	Pricing Structure Statements
	Appendix "E"	Non-Disclosure Agreement
	Appendix "F"	Multiple Technology Solutions (Optional)

rfq09-001 contact centre technologies- telephony acd and switch.doc June 24, 09

1 Introduction and Background

- 1.1 Terasen Gas Inc. ("Terasen") a subsidiary of Fortis Inc. provides natural gas service to approximately 931,000 residential and commercial customers and 2,000 industrial customers through out British Columbia, Canada. Terasen provides service to 95 per cent of BC's natural gas customers and is one of the largest natural gas utilities in Canada.
- 1.2 Terasen is planning on repatriating the customer care services including contact centre services. The services are presently outsourced. To do so, Terasen plans to establish two contact centres. The total workforce in these centres is estimated at approximately 380 with about 275 contact centre agents in total.
- 1.3 Accordingly, Terasen is in the process of requesting bids on premise based contact centre technologies including:
 - (a) Telephony (Switch/ACD) including Reader boards
 - (b) Interactive Voice Response (IVR)
 - (c) Email Management
 - (d) Web Chat
 - (e) Workforce Management Software
 - (f) Outbound Dialer
 - (g) Quality Assurance and Call Recording
- 1.4 The call centre technology acquisitions described above are part of a larger implementation and services transition that is scheduled to complete at the end of 2011.
- 1.5 This Request for Quotation ("RFQ") is for Telephony, ACD and Switch.
- 1.6 Terasen is in a regulated industry and as such is required to get authorization from the regulator (the British Columbia Utilities Commission (BCUC)) for changes of this type and scale.
- 1.7 The centres are expected to be fully operational by July 1, 2011. A full Project schedule with required installation dates will be developed and issued after regulatory approval is provided.

2 Invitation to Bid

Terasen Gas Inc. ("Terasen") invites bidders ("Bidders") to submit quotations ("Quotations") for the Contact Centre Technologies: Telephony, ACD & Switch (the "Project") in accordance with this Request for Quotation ("RFQ") and specifically the following instructions.

3 **Project Scope and Process**

- 3.1 This RFQ has been distributed to selected vendors that we believe possess the capabilities and solutions to assist Terasen in meeting its business needs. The contact centre equipment industry has a number of successful organizations that offer solutions across the spectrum of solutions sought by Terasen. Some Bidders may offer only one solution or may propose multiple technology solutions on more than one of the requested call centre technology components or may choose to partner with other vendors to provide a more comprehensive solution to Terasen .
- 3.2 Where Bidders offer more than one solution they must identify the individual technologies, prices and stand alone components in a separate Appendix Appendix "F". In this Appendix the Bidder can identify any synergies, efficiencies, and discounts that would apply. Include in the Appendix a table showing the RFQ approach provided versus the integrated approach (as outlined in the Appendix) highlighting both short term and long term values to Terasen.
- 3.3 This Appendix must be in addition to the requested RFQ response as outlined in this document.
- 3.4 The final selection of the successful Bidder (s) is subject to approval by the British Columbia Utilities Commission (BCUC). Any Project commencement or cancellation decision will be dependent on the results of the BCUC review. The result of the BCUC review is anticipated to occur in Q1 2010.
- 3.5 The evaluation process will include the following activities:
 - (a) Distribution of the RFQ;
 - (b) Submission of the Mutual Non Disclosure Agreement, attached hereto in Part 3;
 - (c) Bidder presentations. This half day presentation will be held either at the Terasen offices or via a webex or similar remote delivery. See Section 8 below.

4 Identification of Bidders:

Each Quotation shall include the Bidder's:

- (a) Name and address
- (b) Telephone number
- (c) Facsimile number
- (d) Email Address
- (e) Signature of authorized signatory
- (f) Name (printed) of authorized signatory
- (g) Title of authorized signatory

(h) RFQ Identification Number - RFQ09-001

5 Information/Clarification

- 5.1 Terasen will accept requests for information or clarification regarding this RFQ. Such requests shall be addressed in writing via email to Mr. Colin Taylor at ctaylor@thetaylorreachgroup.com of The Taylor Reach Group, Inc. (TRG) by the date indicated in Section 7 Timeline below. All replies shall be confirmed in writing by Terasen via TRG and any reply other than in writing is invalid. Any instructions or information given to Bidders other than by Mr. Colin Taylor is invalid.
- 5.2 A reply to all questions, if any, shall be made in the form of an addendum(s) which will be forwarded to all Bidders.
- 5.3 No verbal agreement or conversation made or had at any time with any officer, agent or employee of Terasen, nor any oral representation by such officer, agent or employee, shall add to, detract from, affect or modify the terms of the Request for Quotation or be relied upon in any way whatsoever, unless specifically incorporated in a written addendum issued by Terasen.

6 Knowledge of Work

- 6.1 Before submitting their Quotation, Bidders shall obtain all necessary information, local or otherwise as to risks, contingencies and other circumstances which may influence or affect their Quotation.
- 6.2 All communications during the Request for Quotation period shall be made directly with:
 Mr. Colin Taylor
 The Taylor Reach Group, Inc.
 Toronto, Ontario
 416-979-8692 Ext. 200

Email: ctaylor@thetaylorreachgroup.com

7 Time Line

The following table reflects the desired timing of the RFQ process:

Key Event	Deadline Date
Issue of Request for Quotation	June 24, 2009
Close of RFQ Clarification Question Period	June 30, 2009
Issue Final RFQ Clarification Responses	July 6, 2009
Closing Date	July 13, 2009
Start of Evaluation Period	July 14, 2009
Short List Bidders (to no more than 3)	July 20, 2009

Key Event	Deadline Date
Bidder Demonstrations	July 21 to July 28, 2009
Announcement of Contract Award	August 11, 2009
Approval of Contract Award by BCUC	To be determined and is anticipated Q1, 2010

8 Quotation Format

All Quotations must be submitted in the following format. The Bidder shall respond to each line item in each Attachment to each Appendix set out below:

8.1 Degree of Functional Technical and Requirement Fit

Terasen is seeking the highest possible correlation between the functional and technical capabilities of the desired solution and that of the successful Bidder. To this end the Requirements Matrix (Appendix "A") has been created. The Requirements Matrix includes tabs outlining the Requirements of Terasen and the Requirement Questions . Together with the Requirement Questions, the <u>Bidder</u> <u>Qualifications Questionnaire</u> responses and pricing will form the basis of the evaluation criteria.

8.2 Bidder Qualifications Questionnaire

In order to assess the proposed solutions and to understand the degree of fit and alignment with the desired solution outcome for Terasen a detailed questionnaire has been attached as Appendix "B". The questions posed in the questionnaire will assist Terasen to accurately assess the Bidders Quotation.

8.3 Product Cost

Bidders must include a completed Pricing Structure Statement using the table attached to Appendix "D". This template provides both the basis for providing, installation, initial license fees (per seat, concurrent or named user) and the ongoing software maintenance fees. Instructions are provided in Appendix "D".

- (a) Additional Required Software Components Space is provided to include any and all required Bidder-provided application modules and/or third-party products required to operate the proposed solution.
- (b) Potential Discounts If the Bidder is willing to discount the pricing of any proposed application module, the discount rate to be applied can be entered in the response to Appendix "D". The values should be entered as a percent discount to be applied.

8.4 Bidder's License Agreement

Bidders shall include their standard Licensing Agreements: Software License Agreement, Software Maintenance Agreement, and Licensed Software Escrow Agreement and any other relevant license agreements in their Quotation which will be reviewed and assessed for commercial reasonableness. This assessment is part of the selection criteria.

9 Solution Presentation

Each short listed Bidder is asked to deliver a one half day presentation of their product either virtually or at Terasen's offices at 16705 Fraser Highway, Surrey, BC and describe their ongoing maintenance and support capabilities.

- 9.1 The presentation schedule will be coordinated by Colin Taylor and will be communicated to each Bidder. Demonstrations will be conducted between July 21st and July 28, 2009 and are scheduled to be conducted following the determination of a shortlist of Bidders.
- 9.2 A detailed presentation agenda will be provided and Bidder's must strictly adhere to the agenda.
- 9.3 The presentation, at a minimum, must cover the following topics:
 - (a) Introductions/Product Overview
 - (b) Review of Mandatory Requirements
 - (c) Review of Implementation Process
 - (d) Product Functionality
 - (e) Reporting Capabilities
 - (f) Costs
 - (g) Maintenance
 - (h) Support & Sustainment

10 Delivery of Quotation

Three (3) paper sets of the Quotations, and three (3) CD's in MS Word 2003 and MS Excel 2003, shall be submitted in an envelope addressed to:

Mr. David Legge Chief Information Officer Terasen Gas Inc. 16705 Fraser Highway Surrey, British Columbia Canada V4N 0E8

And an electronic copy to:

Mr. Colin Taylor The Taylor Reach Group, Inc 19 Mercer Street, Suite 302 Toronto, Ontario M5V 1H2 or via email to <u>ctaylor@thetaylorreachgroup.com</u>

The paper sets must be clearly marked with the words **"Terasen Gas Inc. Call Centre Technology ACD & Switch"** and delivered up to but not later than 12:00 noon Pacific Time on July 13, 2009.

Faxed Quotations will not be accepted.

All Quotations including spreadsheets must be provided in electronic form as MS Word 2003 and MS Excel 2003 documents. (PDF's will not be accepted).

11 Request for Quotation and Quotation Proprietary and Confidential

- 11.1 In addition to the specific information covered by the Mutual Non Disclosure Agreement, all information in this Request for Quotation is confidential and should not be disclosed by the Bidder except as required in the preparation of the Bidder's Quotation.
- 11.2 The Bidder may designate portions of its Quotation that are proprietary in nature and Terasen agrees not to disclose those portions except as required by the evaluation process or if requested by the BCUC, in which case the designated portions of the Quotation will be provided in confidence to the BCUC.

12 Quotation Preparation Costs

Costs associated with preparing Quotations in response to this Request for Quotation are the sole responsibility of Bidders.

13 Acceptance and Rejection of Quotations

- 13.1 Quotations will be opened privately at the offices of Terasen. Following submission of the Quotation and within forty-eight (48) hours of being requested, Bidders shall provide such additional information as called for herein and as may be required by Terasen.
- 13.2 Terasen reserves the right to reject any or all Quotations, including without limitation the lowest Quotation even if the lowest Quotation conforms in all respects with the Request For Quotation, and to award the Contract to whomever Terasen in its sole and absolute discretion deems appropriate, notwithstanding any custom of the trade to the contrary nor anything contained in the Request For Quotation or herein. Terasen shall not, under any circumstances owe a duty of care or duty of fairness to any Bidder or, be responsible for any costs incurred by

any Bidder in the preparation of its Quotation or for any damages whatsoever arising out of or related to the rejection of any Quotation.

- 13.3 Should a Bidder fail to complete its Quotation in strict compliance with the requirements of the Instructions to Bidders, Terasen, in its sole and absolute discretion, may nonetheless waive such non-compliance, seek clarification from and enter into negotiations with that Bidder and award the Contract to that Bidder, even if such failure in compliance would at law render the Quotation null and void. Failure to comply with any provision of the Instructions to Bidders described in mandatory terms such as "must" or "shall" shall not result in a Quotation being disqualified or rendered void unless Terasen, in its sole and absolute discretion, elects not to consider the Quotation any further, otherwise Terasen in its sole and absolute discretion may waive such non-compliance and still consider the Quotation.
- 13.4 Without limiting the generality of the foregoing, Terasen reserves the right, in its sole and absolute discretion, to accept or reject any Quotation which in the view of Terasen, is incomplete, obscure, or irregular, which has erasures or corrections in the documents, which contains exceptions and variations, which omits one or more prices, which contains prices Terasen considers unbalanced.
- 13.5 Criteria which may be used by Terasen in evaluating Quotations and selecting the short-list of Bidders and the weight, if any, to be given to the criteria are in Terasen's sole and absolute discretion and, without limiting the generality of the foregoing, may include one or more of:
 - (a) Total cost to Terasen;
 - (b) The Bidder's track record in similar or related projects;
 - (c) Ability to meet business requirements of the Project;
 - (d) Understanding and ability to meet Terasen's requirements;
 - (e) Commercial reasonableness of the Bidder's standard Software License Agreement and Software Maintenance Agreement; and
 - (f) Quality and completeness of the Bidder's Quotation.
- 13.6 Should Terasen not receive any Quotation satisfactory to it in its sole and absolute discretion, Terasen reserves the right to cancel the Request for Quotation or retender the Request for Quotation. The Quotation shall remain valid, irrevocable and open for acceptance by Terasen without qualification for the period from the Closing Time for submission of Quotations, until the Project is approved by the BCUC. The approval by the BCUC is anticipated to occur in Q1, 2010 Terasen reserves the right to enter into negotiations with any one or more Bidders on any or all aspects of their Quotation.
- 13.7 Notwithstanding any other provision of the Request for Quotation, it is a fundamental condition of this call for Quotations and the receipt and consideration of Quotations by Terasen that Terasen and its employees, contractors, consultants and agents will not and shall not under any circumstances whatsoever, including without limitation whether pursuant to contract, tort, statutory duty, law, equity or otherwise, and including but not limited to any

actual or implied duty of fairness, be responsible or liable for any costs, expenses, claims, losses, damages or liabilities (collectively and individually "Claims") incurred or suffered by Bidders as a result of, arising out of, or related to any of the Request For Quotation, any Addenda, the preparation, negotiation, acceptance or rejection of any conforming or non-conforming Quotation, the rejection of any Bidder, the cancellation, suspension or termination of the tendering process, or the postponement, suspension or cancellation of the Work, and by submitting a Quotation each Bidder shall be conclusively deemed to waive and release Terasen and its employees, contractors, consultants and agents from and against any and all such Claims. Bidders shall indemnify and hold harmless Terasen and its employees, contractors, consultants and agents against any and all Claims brought by third parties against Terasen or any of its employees, contractors, consultants and agents which arise out of or are related to any one or more of the preparation, submission and negotiation of any Quotation by the Bidder. Without limiting the generality of the foregoing, Terasen shall not be under any obligation whatsoever to award the Work to the Bidder or anyone else and may cancel the Request for Quotation and reject any or all Quotations received at any time for whatsoever reasons Terasen in its sole, absolute and unfettered discretion considers to be its best interest.

1 Scope of Work

- 1.1 For purposes of this Request for Quotation (RFQ) the following assumptions are provided:
 - (a) The telephony solution will be IP Telephony and as such the calls and contacts will be processed and transported over the Terasen data network;
 - (b) At least one of the two locations will service emergency calls and as such require full redundancy and fail over in addition to UPS back up and generators. Not all applications are required to be redundant;
 - (c) The two centres will house the contact centres and the larger facility located in the lower mainland area of British Columbia will also house approximately 90 back office staff;
 - (d) The emergency line services operate on a 7/24/365 basis. The second center will operate on a 16 hour per day basis;
 - (e) Approximate Average Monthly Volumes

i)	Customer Service	66,000
ii)	Collections	18,000
iii)	Emergency	5,500
iv)	Outbound Collection	3,500
v)	Outbound Automated	53,000
vi)	Email	2,500;

(f) Seasonality- The chart below illustrates the contact volume seasonality expected. There is no material change in total contact volumes anticipated over the next three years although there may be changes in the methods and channels customers prefer to use to contact the Company; and



(g) Network Structure- The following conceptual diagram illustrates a high level vision of the new environment. This is an illustrative example only and does not suggest that the presence of, number, location of any of the technology has been determined. The Bidder should propose their best solution to meet the requirements of Terasen.



Figure 2- High Level Illustrative Architecture

Note: the above architecture identifies a number of technologies in both locations, this indicates redundancy requirements.

The information on the architecture above has been summarized on the following table.

	Lower		
Description	Mainland	Interior	Notes
Agents	130	90	
Total Staff	270	110	
Operating Hours	7 x 24	16 hrs/day	
		* 5 days/wk	
Inbound Contact Centre	X	X	
Multiple Queues	X	X	
Inbound IVR	X	X	
Outbound IVR	X	X	Automated proactive interactive calls
Outbound Predictive	Х	X	
Email Management	Х	X	
Chat	Х	X	
QA Recording &	X	X	Managed from Lower Mainland for
Monitoring			both centres
Computer Telephony	Х	X	(CTI) for screen pops of accounts and
Interface			callers
Workforce Management	Х		Managed from Lower Mainland for
(WFM)			both centres, for both forecasting and
			scheduling
Voice Storage	X		Can be connected or part of QA Tool
Gateway to M1 61	Х		Gateway to Nortel M1, Option 61C
Integrations Required			SAP CRM 7.0, Vista Operating System

Technology Infrastructure

Figure 3- Technology Infrastructure Table

It is assumed that Terasen will purchase and provide all servers and hardware where possible. Bidders are requested to identify server specifics including memory requirements, CPU, storage requirements etc. If bidding on the telephony switch also provide the cost of appropriate and recommended reader boards in their response.

Bidder's Quotation

1 REFERENCE NUMBER: RFQ09-001

- 2 PROJECT: Contact Centre Technologies: Telephony, ACD & Switch -
- 3 SUBMISSION DATE: 12:00 P.M. (local time) July 13, 2009

Quotations are irrevocable until BCUC approval of the Project.

4 **REQUIREMENTS DOCUMENT**

- 4.1 The Bidder shall complete the Requirements document included in Appendix "A" attached hereto.
- 4.2 The Bidder may offer multiple technology solutions which shall be set out in Appendix "F".

5 QUOTATION QUALIFICATION QUESTIONNAIRE

The Bidder shall complete the Quotation Qualification Questionnaire document included as Appendix "B" attached hereto.

6 INTERFACE SPECIFICATIONS

The Bidder shall complete information on the Interface Specifications document included as Appendix "C" attached hereto.

7 PRICING REQUIREMENTS (GST extra, BCSST included if applicable)

7.1 Pricing Structure Statement

The Bidder shall complete the Pricing Structure Statement included in Appendix "D" attached hereto in accordance with the instructions set out therein.

7.2 Currency

All prices shall be quoted in Canadian dollars. Where applicable, prices shall contain all duties and excise taxes.

7.3 All prices must be firm for the duration of the resulting order of this Request for **Quotation**. Unless otherwise indicated on the face of this form or in a covering letter, any Federal or British Columbia sales taxes applying against the goods covered by this Quotation shall be separate line items and shall **not** be included in the base price.

8 FORM OF AGREEMENTS

8.1 Form of Standard Software License Agreement

The Bidder shall attach their Standard Software License Agreement their response to this Request for Quotation.

8.2 Form of Standard Software Maintenance Agreement

The Bidder shall attach their Standard Software Maintenance Agreement to their response to this Request for Quotation.

8.3 Licensed Software Escrow Agreement

In order to mitigate the risk to Terasen associated with the financial failure of the Bidder, Terasen desires to negotiate a Licensed Software Escrow Agreement. The availability of the proprietary technology of the Bidder is critical to Terasen in the conduct of its business and, therefore, Terasen needs access to the proprietary technology under certain limited circumstances. Terasen therefore desires to establish an escrow with an Escrow Services Vendor to provide for the retention, administration and controlled access of the proprietary technology materials of the Bidder.

The Bidder shall provide a statement indicating compliance with the desire of Terasen as it relates to a Licensed Software Escrow Agreement or any exceptions taken to the establishment of such an agreement. The Bidder shall also provide information concerning the cost (if any) to Terasen for the establishment of the agreement and any estimated annual cost to be paid to the Escrow Services Vendor for the management and verification of future releases and upgrades of the software vendor's licensed software and other deposit materials.

8.4 Mutual Non Disclosure Agreement

The Bidder shall execute the Mutual Non Disclosure Agreement attached hereto as Appendix "E" and return it up to but no later than the due date indicated in Part 1 of this Request for Quotation.

9 ADDENDA ACKNOWLEDGMENT

In the event that Terasen issues any addenda please acknowledge receipt as part of your response in the following format:

Addendum #	Date Received

10 ATTESTATION

Quotation shall include the following attestation:

In Witness Whereof the Bidder has caused its seal to be affixed at ______ the _____ the _____ day of July, 2009.

The seal of the Bidder was hereunder affixed in the presence of:

Signature

OR

Print name

In Witness Whereof the Bidder has duly executed this Quotation at ______ the _____ the _____ day of July, 2009.

Signature

Witness

Print name

Title

Appendix A – Requirements

1 Requirements

- 1.1 This document and the Appendix "A" referred to below and attached to Part 3 outline the Requirements respectively of Contact Centre Technologies: Telephony, ACD & Switch
- 1.2 The Bidder shall complete the Requirements document attached to Appendix "A" as an indication of the proposed solution's fit with Terasen requirements, which include but are not limited to the following business areas:
 - a) Contact Centre Best Practices
 - b) End to end reporting
 - c) Integration and Interoperability to all required technology applications
 - d) Technical Architecture
 - e) System Administration
 - f) System Operations
 - g) Integration and Interoperability to all required technology applications
 - h) Integration to Nortel Meridian 1 Option 61C and SAP CRM 7.0
 - i) Operation based on Vista Operating system

Instructions for response to the Requirements document attached to Appendix "A".

2 Instructions to Bidders

2.1 Definitions

Please provide responses to each of the requirements as to the proposed solution's ability to best achieve the results according to the following definitions:

2.2 Response Requirements

If the Bidder believes their solution cannot or would not be successful in satisfying a line item through configuration, enhancement or system modification, indicate as such by putting an "X" in the "Not Supported" column. For each of these as indicated, provide in the "Notes" column the reason your organization believes the solution can not provide the requested function or feature and a suggestion, if any, as to how Terasen could potentially achieve this requirement. For all requirements where the proposed solution is compliant, please indicate as such by putting an "X" in one of the three 'Compliant' columns ("Out of the Box", "Configurable", or "API or integration to 3rd party solutions available").

(a) For each function requiring configuration, enhancement, and/or modification, or where an API/Integration to a 3rd party exists, provide an estimated level of workdays required in each respective column, a Total of Estimated Workdays, and the Total Cost.

(b) If a requirement is repeated and your response indicates all workdays and related cost in another line item, provide the reference to that line item on the "duplicated" line.

3 Terasen Requirements Imbedded

A copy of the Terasen Requirements document is imbedded and may be accessed by double clicking on the following icon.



Appendix B – Quotation Qualification Questionnaire

1 General Company Information

- (a) Provide the Corporate name, headquarters address and key contact information (phone, fax, email address) of Respondent.
- (b) Identify any parent companies or subsidiaries of the Respondent.
- (c) Does Respondent have plans or knowledge of any acquisition, merger, or significant change in ownership?
- (d) Provide information for the last three years regarding the amount of revenue generated by your company specifically related to implementation of projects similar to that requested by this RFQ.
- (e) Provide the number of employees employed by your company and how many are dedicated to providing implementation support to projects related to the same technologies as requested by this RFQ.
- (f) If Respondent's annual report (as requested in Section 5.10) does not include an organizational chart of Respondent's officers and key managers, please provide one.
- (g) Is your organization currently involved in any litigation? If so, please provide details.
- (h) Please provide your current Dun and Bradstreet rating information.
- (i) How long has your organization been offering the hardware/software products and services within the contact centre market space?
- (j) Explain the process offered for future releases, enhancements and, if any, Terasen's ability to influence future product enhancements and/or releases.
- (k) Please describe your participation or commitment to user conferences, industry trade shows, and other seminars/ workshops. Do you provide for client attendance at these events?
- (l) Please provide a website address and contact information for your main user group representative.

2 Previous Experience

Provide a list of customers comparable to Terasen for whom you have provided similar technology (hardware/software) implementation services utilizing the proposed product (these are in addition to your references). Please provide performance metrics achieved on these projects including adherence to project budget and schedule.

3 Resource Management

- (a) Provide details of the relationship(s) of all companies (e.g., subcontracts) included in your response. Please include information regarding relationship contracts, commitments and responsibilities.
- (b) Please describe your proposed policy/process for the replacement of Project resources which are removed from the Project due to normal turnover (resignation, termination, etc.) or which are removed at the request of the client (for performance or other reasons).
- (c) For on-site resources, how many full time days per work week (excluding travel time) will they be on-site at TGI's offices? Are any special work schedules or variable work weeks anticipated to be worked by on-site resources (e.g. non-standard working hours, etc)?
- (d) Please provide a detailed Project Plan illustrating the implementation timeline, resources, resource names and detailed dependencies.
- (e) Does the company have certified sales engineering resources available to us and the project?
- (f) Please specify certifications held by applicable sales engineering resources.

4 Documentation and Training

- (a) Describe your "development documentation" approach and provide a list of supporting documentation that will be developed during the project effort. Please include specific information regarding "leave-behind" documentation that will be provided to address future TGI efforts.
- (b) Describe your administrator and typical end-user Training approach.
- (c) Describe a recommended support model for Terasen including the required staffing and skill set to support the solution proposed.
- (d) Describe recommended application and technical training.
- (e) Describe your approach for transferring knowledge to the client resources to ensure self-sufficiency upon Project completion.
- (f) Please identify any additional education, training or certification courses that are available.

5 Exceptions Taken to the RFQ

(a) Document any exceptions taken to the RFQ and/or standard terms and conditions. Also document any and all key assumptions made in developing your response to this RFQ.

Appendix C Interface Specifications

The Bidders solution will require integration to Terasen's CRM environment: SAP CRM 7.0 and will need to operate on Terasen's network. Terasen requires that the proposed solution be certified to run under Microsoft's Vista Operating system. In addition the proposed solution will need to integrate with the other selected contact centre technologies being sought through parallel RFQ processes.

On the attached form please indicate your compatibility and/or integration to SAP CRM 7.0 and Vista Operating System by marking the an 'X' in the appropriate box. Please indicate for each of the equipment categories the solution providers for whom your solution has an existing integration path.



Note: Please indicate your existing integration to SAP CRM 7.0 and Vista Operating System. and/or indicate that integration needs be developed. Ensure that any integration costs are included on the appropriate page in Appendix D. Please indicate the Manufacturer, Version, and Release of all Integrations. Add additional rows as required to identify all integrations.

rfq09-001 contact centre technologies- telephony acd and switch.doc June 24, 09

Appendix D – Pricing Structure Statement

1. Instructions to Bidders

Please complete the pricing schedules in the attached Appendix in the format specified. Fully document any assumptions or considerations used in arriving at your pricing Quotation.

The Bidder should complete and return as part of their response to this RFQ, all tables contained in this Appendix. Responses shall be provided within the tables attached and shall be submitted electronically in Excel format. Instructions for the completion of these tables are as follow:

- a) Provide detailed answers for each line item contained in the respective tables and forms.
- b) Include supporting brochures and literature, as you believe valuable for the additional review of the project team (one set per response). Such literature should be additional and not instead of providing the detail response for any line item.
- c) Describe how the application license may be utilized assuming the license is with Terasen. Describe the impact to the software license agreement in the event of acquisition of another company, merger with another utility, use by Terasen subsidiaries and affiliates, or joint ventures with other utilities.
- d) Indicate pricing for relevant equipment such as telephone sets, ReaderBoards and any proprietary hardware in Schedule 3.
- e) Identify hardware (servers, routers, storage etc.) including specification that may be purchased directly by Terasen, where possible in the lower table in Schedule 3.
- **2.** A copy of the Terasen Pricing Structure Statement document is imbedded and may be accessed by double clicking on the following icon.



SCHEDULE 1 - INITIAL ACQUISITION COSTS						
	INITIAL LICENSE COSTS* Complete All Appropriate Column(s)					
Application Modules	Per Seat	Per Named User	Per Concurren t User	Other (specify)	Notes/ Comments	
List each element proposed, the license fees for each and any/all required additional software, utilities, development tools and/or third party software. If multiple pricing plans are available (e.g. site license or per seat license), please provide information on each of the plans with an explanation on how to determine the overall license fees for Terasen. Additional lines may be added to this schedule if necessary by inserting additional table row.						

Appendix D – Pricing Structure Statement

Appendix D - Pricing Structure Statement (continued)

SCHEDULE 2 – SITE LICENSING FEES							
Application Modules Site License Notes/Comments							
Provide a proposed site license fee for Terasen. Site license may be provided on a module-by- module basis or for the entire integrated suite. Please describe any additional assumptions upon which the site license charge is based. Also identify any third party modules required to meet Terasen requirements but not included in the proposed site license.							

Describe how the application license may be utilized assuming the license is with Terasen. Describe the impact to the software license agreement in the event of acquisition of another company, merger with another utility, use by Terasen subsidiaries and affiliates, or joint ventures with other utilities.

SCHEDULE 3- HARDWARE ACQUISITION COSTS							
	INITIAL HARDWARE COSTS* Complete All Appropriate Column(s)						
Hardware Required	UnitsNotes/DescriptionRequiredCostComments						
List each hardware component proposed, the purchase fees for each and any/all required additional software, utilities, development tools and/or third party software required. Indicate in the Notes section if this hardware can be purchased separately from this RFQ by Terasen. Additional lines may be added to this schedule if necessary by inserting additional table row.							

Appendix D – Pricing Structure Statement (continued)

SCHEDULE 4 – ADDITIONAL FEES				
Cost Item	Response	Comments/Discussion		
License Fee for additional Site(s) or for an Affiliate, if applicable.				
Anticipated License Fee increases for each year over the next 10 years.				
Year 1				
Year 2				
Year 3				
Year 4				
Year 5				
Year 6				
Year 7				
Year 8				
Year 9				
Year 10				
Annual cap on percentage increases for maintenance.				
Proposed payment schedule for license fee payment.				
Proposed Warranty period.				
Proposed start date for maintenance agreement fees.				
Vendor Software Maintenance Fees (also, include how they are derived (e.g., based on a percentage of license fees, based on price per modification, etc.)				

Appendix D – Pricing Structure Statement

SCHEDULE 5 – TEN YEAR COST OF OWNERSHIP					
Cost Item	Payment Schedule/ Date	Amount	Comments/Discussion		
Based on the information in the above schedules, please provide an estimate of the cost of ownership to Terasen over the next 10 years.					
One-Time/Initial License Fees					
Year one maintenance charges					
Year two maintenance charges					
Year three maintenance charges					
Year four maintenance charges					
Year five maintenance charges					
Year six maintenance charges					
Year seven maintenance charges					
Year eight maintenance charges					
Year nine maintenance charges					
Year ten maintenance charges					
Total cost of ownership					

Appendix D – Pricing Structure Statement (continued)

Appendix E – Non Disclosure Agreement

NON-DISCLOSURE AGREEMENT

This Non-Disclosure Agreement is entered into this ______ day of _____, 2009, by and between _____ (the "Bidder") with its principal offices at _____ and Terasen Gas Inc. ("Terasen") located at 16705 Fraser Highway, Surrey, BC V4N 0E8.

WHEREAS:

- A. Each Party has Proprietary Information concerning its business that it protects from public disclosure and maintains as confidential and proprietary ("Proprietary Information") and each party intends to maintain the trade secret and confidential status of its Proprietary Information;
- B. For the purpose of discussions concerning the evaluation and review of the Request for Quotation Contact Centre Technology (the "Request for Quotation") and any response received, each party may disclose its Proprietary Information to the other party.
- C. Each party considers its Proprietary Information to be of significant commercial value and agrees to disclose such Proprietary Information to the other party only for the purpose set forth above and under the terms and conditions set forth above and under such terms and conditions contained herein.

NOW THEREFORE, in consideration of the mutual covenants expressed herein and other good and valuable consideration, the receipt and sufficiency of which each party acknowledges, the parties agree as follows:

1 DEFINITION

"Proprietary Information" means this Request for Quotation, information or data, including but not limited to business plans, product plans, customer information, technical specifications and design techniques, relating to:

(a) Bidder's software, trade secrets, technology, know-how, business plans, and other confidential information relating to its business, assets, undertakings and customer information, (without limitation) any and all formulas, compilations, programs, concepts, ideas, methods, techniques, processes, information, data, research, reports, documents, tables, strategies, intellectual property or trade secrets that have been used or developed by or for Bidder and reasonably identifiable as confidential and proprietary. It may include written or verbal/visual information; and

(b) Terasen's trade secrets, technology, know-how, business plans, and other confidential information relating to its business, assets, undertakings and customer information, (without limitation) any and all formulas, compilations, programs, concepts, ideas, methods, techniques, processes, information, data, research, reports, documents, tables, strategies, intellectual property or trade secrets that have been used or developed by or for Terasen. It may include written or verbal/visual information. In order to be considered Proprietary Information, written information must be identified at the time of the disclosure with an appropriate legend, marking, stamp or other identification on the face thereof as Proprietary Information. In order to be considered Proprietary Information, verbal or visual information shall be so identified at the time of said disclosure and the disclosing party shall notify the receiving party in writing within thirty (30) days of the disclosure and specifically identify the Proprietary Information previously disclosed. Electronic media, computer software or any other similar type of machine readable format shall be considered a verbal disclosure pursuant to this Agreement.

2 PURPOSE

The purpose ("Purpose") of this Agreement is to permit each party to provide Proprietary Information to the other party for the purpose of evaluating and reviewing such Proprietary Information in connection with Terasen's selection of an optimal software application.

3 PERMITTED DISCLOSURE

Subject to Section 5 hereof, each party agrees to keep Proprietary Information received from the other party in confidence and not disclose such Proprietary Information to any third parties except officers, directors, employees, agents, consultants, or subcontractors of the receiving party with a "need to know" and that are obligated in a manner consistent with this Agreement to maintain the confidentiality of the Proprietary Information, in order to accomplish the Purpose stated above, and provided that such third parties shall first agree in writing to be bound by a like obligation of confidentiality with respect to such Proprietary Information as the receiving party is bound. Notwithstanding the foregoing, the Bidder acknowledges and agrees that may be required to disclose its Proprietary Information to Terasen's regulator, the British Columbia Utilities Commission pursuant to Section 5(f) of this Agreement.

4 USE OF PROPRIETARY INFORMATION

The receiving party shall use any Proprietary Information received hereunder only for internal evaluation and use consistent with the Purpose. Notwithstanding the generality of the foregoing the Bidder shall only use the Request for Quotation for the sole purpose of responding to the Request for Quotation.

5 EXCEPTIONS TO NON-DISCLOSURE

Notwithstanding Section 3 above, neither party shall be liable under this Agreement if a disclosure or use of Proprietary Information received hereunder is made where the Proprietary Information:

- (a) was in the public domain at the time of disclosure or is subsequently made available to the general public without restriction and without breach of this Agreement by the receiving party; or
- (b) was known by the receiving party at the time of disclosure without restrictions on its use or shown to have been independently developed by the receiving party, as shown by adequate documentation; or
- (c) is used or disclosed in manner consistence with the prior written approval of the disclosing party; or
- (d) is used or disclosed inadvertently despite the exercise of the same degree of care as each party takes to preserve and safeguard its own Proprietary Information; or
- (e) is lawfully received by the receiving party at any point in time from a third party which is under no obligation to keep such Proprietary Information in confidence; or
- (f) is used or disclosed pursuant to a court order, subpoena or other lawful order of a court or governmental authority of competent jurisdiction provided, however, that the receiving party shall to the extent that it is not legally prohibited from doing so give the disclosing party prompt written notice of such disclosure so that the disclosing party may either waive compliance with the Agreement or seek (and in which case the other Party shall use reasonable efforts to assist the disclosing party to obtain) a protective order.

6 RETURN OF PROPRIETARY INFORMATION

Upon termination of this Agreement, the receiving party shall promptly return to the disclosing party all Proprietary Information that has been or may hereafter be received or acquired by the receiving party, including all copies, reproductions and records containing Proprietary Information whether in electronic or other format.

7 DELETION OF PROPRIETARY INFORMATION

The receiving party will, upon the reasonable request of the disclosing party, delete from all retrieval systems or databases and destroy all records and documents in the possession of the receiving party containing Proprietary Information of the disclosing party within ninety (90) days of receipt of notice from the disclosing party.
8 EXPENSES

Each party shall use its own resources and funds in carrying out the provisions of this Agreement and neither party shall reimburse the other for expenditures or costs incurred hereunder.

9 OWNERSHIP OF PROPRIETARY INFORMATION

All Proprietary Information delivered by either party pursuant to this Agreement shall be and remain the property of the disclosing party. Any written analyses or summaries of the Proprietary Information or things or tangible forms that embody or that are derived from the Proprietary Information will remain the property of the disclosing party. All such Proprietary Information, any copies thereof will be promptly returned to the disclosing party upon written request.

10 NO LICENSE RIGHTS

Nothing contained in this Agreement shall be construed to grant the receiving party any right or license under any intellectual property right of the disclosing party.

11 NO WARRANTIES OR REPRESENTATIONS

Any Proprietary Information exchanged under this Agreement shall carry no warranties or representations of any kind, either expressed or implied. The receiving Party shall not rely on the Proprietary Information for any purpose other than to make its own evaluation thereof.

12 NO RELATIONSHIP

The parties agree that this Agreement is for the purpose of protecting Proprietary Information only. This Agreement does not create a joint venture, agency, partnership or other business relationship between the parties.

13 INJUNCTIVE RELIEF

It is understood and agreed irreparable harm may result to the disclosing party if the receiving party breaches its obligations under this Agreement and the parties further acknowledge that money damages are insufficient remedy for any violation or threatened violation of this Agreement and the disclosing party shall be entitled to injunctive relief as a remedy for any such breach. Such remedy shall not be the exclusive remedy for any breach of this Agreement but shall be in addition to any other available remedies.

14 GOVERNING LAW

This Agreement shall be governed by and construed in accordance with the laws of the Province of British Columbia, and the parties irrevocably consent to the jurisdiction of

the courts of British Columbia only as they may be asked to rule on the terms and conditions of this Agreement.

15 BINDING AGREEMENT

This Agreement shall be binding upon the parties, their successors and assigns. Neither party shall assign this Agreement or any Proprietary Information received hereunder without the express written consent of the other party.

16 SEVERABILITY

In the event that any provision of this Agreement shall be held to be illegal, or otherwise unenforceable, such provision shall be severed and the entire Agreement shall not fail on account thereof and the balance of the Agreement shall continue in full force and effect, provided, however, that if the severing of such provision results in a material alteration of this Agreement, the remaining provisions of this Agreement shall be adjusted equitably so that no party benefits disproportionately.

17 COMPLETE AGREEMENT

This Agreement represents the entire understanding between the parties as to the matters herein contained and relative thereto and supersedes all other agreements, oral or written, express or implied, between the parties at the effective date of this Agreement. Any conflict between the language on any specified legend or stamp on any Proprietary Information received hereunder and this Agreement shall be resolved in favor of the language of this Agreement.

18 AUTHORIZATION

Both parties represent and warrant that each has the authority to enter into this Agreement and each represents and warrants that it has the authority to disclose Proprietary Information to the other for its use and disclosure in accordance with the terms of this Agreement and that such use and disclosure will not subject the disclosing party or its Representatives to any liability associated therewith.

19 COUNTERPARTS

This Agreement may be executed in counterparts with the same effect as if all parties had signed the same document. All counterparts will be construed together and will constitute one agreement.

IN WITNESS WHEREOF, parties have executed this Agreement by their authorized representatives as of the date set forth below.

	TERASEN GAS INC.
Ву	Ву
Name	Name
Title	Title
Date	Date

If the Bidder elects to offer multiple technology solutions or more than one of the requested call centre technology components, they shall:

- a) identify the individual technologies;
- b) identify the prices;
- c) identify the stand alone components;
- d) identify any synergies, efficiencies and discounts that would apply.

They must submit a table showing the RFQ approach provide versus the integrated approach highlighting both short term and long term values to Terasen. These are in addition to the Quotation specifically requested in this RFQ.

Appendix U ASPECT SOFTWARE INC. – CALL CENTRE TECHNOLOGIES PROPOSAL

FILED CONFIDENTIALLY

Appendix V CUSTOMER CARE CALL CENTRE EXECUTIVE SUMMARY AND COLLECTIVE AGREEMENT

FILED CONFIDENTIALLY

Appendix W KPMG – ECONOMIC IMPACTS OF THE CUSTOMER CARE ENHANCEMENT PROJECT

THIS DOCUMENT WAS NOT AVAILABLE AT THE TIME OF FILING. IT WILL BE FILED WHEN AVAILABLE.

Appendix X DETAILED COSTS AND FINANCIAL MODEL

FILED CONFIDENTIALLY

Appendix Y GANNETT FLEMING – CUSTOMER INFORMATION SYSTEM DEPRECIATION REVIEW

THIS DOCUMENT WAS NOT AVAILABLE AT THE TIME OF FILING. IT WILL BE FILED WHEN AVAILABLE.

Appendix Z DRAFT ORDER, AUGUST 28, 2009



to Order No. G-XX-0X Page 1 of 3

> TELEPHONE: (604) 660-4700 BC TOLL FREE: 1-800-663-1385 FACSIMILE: (604) 660-1102

SIXTH FLOOR, 900 HOWE STREET, BOX 250 VANCOUVER, B.C. V6Z 2N3 CANADA web site: http://www.bcuc.com

IN THE MATTER OF the Utilities Commission Act, R.S.B.C. 1996, Chapter 473

and

An Application by Terasen Gas Inc. for a Certificate of Public Convenience and Necessity for the Customer Care Enhancement Project – The Insourcing of Customer Care Services and Implementation of a New Customer Information System

BEFORE:

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

WHEREAS:

- A. On June 2, 2009, Terasen Gas Inc. ("Terasen Gas") filed an Application pursuant to section 45 of the Utilities Commission Act (the "Act"), for a Certificate of Public Convenience and Necessity ("CPCN") (the "Application") for the Customer Care Enhancement Project ("Project"); and
- B. Terasen Gas seeks approval for the creation of a non-rate base deferral account attracting allowance for funds used during construction ("AFUDC") and approval to record incremental operating and maintenance ("O&M") costs associated with the Project that are incurred prior to the Project implementation date of January 1, 2012 for the purposes of permitting cost recovery; and
- C. Terasen Gas seeks approval pursuant to sections 59 61 of the Act for the creation of a rate base deferral account into which the accumulated amount in the non-rate base deferral account will be transferred, effective January 1, 2012, for the purpose of recovering costs through customer rates commencing in 2012; and
- D. The Project involves insourcing of key components of customer care services and the implementation of a new customer information system ("CIS") under the control of Terasen Gas, and requires a change of scope in the current Client Service Agreement with CustomerWorks LP; and
- E. Terasen Gas says in the Application that: its customer care function is a vital part of providing service to its customers, and consequently represents a core element of its business; in order for Terasen Gas to continue to serve its customers well, it needs to adapt and change as customers require new and different services; and, underpinning this ability to provide service excellence is a technology platform, referred to as a Customer Information System, or CIS.



to Order No. G-XX-0X Page 2 of 3

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- F. Terasen Gas says that based on a review, conducted with the assistance of experienced consultants, of available outsourcing models, Terasen Gas concluded that bringing the core elements of the customer care function into Terasen Gas and implementing a new CIS technology platform under the control of the Company is in the best interests of customers and Terasen Gas; and
- G. The total Project implementation costs are estimated to be \$122 million including AFUDC; and
- H. Commission Order Number G-29-02, which approved the Client Services Agreement with CustomerWorks LP dated January 1, 2002, required Terasen Gas to submit for review any significant improvement initiatives and scope changes pursuant to the Client Services Agreement; and
- I. By Order G-68-09 dated June 4, 2009, the Commission established a regulatory timetable that included a Workshop to review the Application on June 16, 2009, and a Procedural Conference on June 23, 2009; and
- J. On June 10, 2009, the Commission issued Letter L-38-09 advising of its concerns relating to the completeness of the Application, and stating that the parties should be prepared to discuss this issue and its effect on Terasen Gas' proposed preliminary regulatory timetable at the June 23, 2009, Procedural Conference; and
- K. In response to Letter L-38-09, on June 15, 2009, Terasen Gas filed a Financial Supplement to address the Commission's concerns with the completeness of the Application; and
- L. By Order G-79-09, the Commission established an amended regulatory timetable; and
- M. On August 28, 2009 Terasen Gas filed an Amended Application consisting of a planned evidentiary update of Project costs and additional information regarding, among other things, the Project and Project alternatives; and
- N. Order No. X-XX-XX dated XXXX, 2009, determined that a written process be established for the review of the Amended Application and set out a Regulatory Timetable; and
- O. The Commission has considered the Amended Application and the evidence and submissions presented and has determined that a Certificate of Public Convenience and Necessity should be issued.

NOW THEREFORE the Commission orders as follows:

- 1. A Certificate of Public Convenience and Necessity is granted to Terasen Gas for insourcing customer care services and the implementation of a new Customer Information System as detailed in the Amended Application (the "Project").
- 2. Approval is granted for the necessary amendments to the scope of customer care services provided by CustomerWorks LP under the Client Services Agreement dated January 1, 2002 to permit



to Order No. G-XX-0X Page 3 of 3

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implementation of the Project by insourcing certain customer care services currently provided under the Client Services Agreement.

- 3. Terasen Gas will use a non-rate base deferral account attracting allowance for funds used during construction and to record incremental operating and maintenance costs associated with the Project that are incurred prior to January 1, 2012 for the purposes of permitting cost recovery.
- 4. Terasen Gas will create a rate base deferral account into which the accumulated amount in the non-rate base deferral account will be transferred, effective January 1, 2012, for the purpose of recovering costs through customer rates.