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November 27, 2009

Regulatory Affairs Correspondence
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British Columbia Public Interest Advocacy Centre
Suite 209 – 1090 West Pender Street
Vancouver, BC
V6E 2N7

Attention: Mr. James L. Quail, Executive Director

Dear Mr. Quail:

Re: Terasen Gas Inc. (“Terasen Gas”)

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”) (the “Application”)

Response to the British Columbia Public Interest Advocacy Centre on behalf of the British Columbia Old Age Pensioners Organization et al (“BCOAPO”) Information Request (“IR”) No. 3

On June 2, 2009, Terasen Gas filed the Application as referenced above. In accordance with Commission Order No. G-134-09 setting out the Revised Regulatory Timetable for the Application, Terasen Gas respectfully submits the attached response to BCOAPO IR No. 3.

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



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1.0 Reference: Exhibit B-4, Table 4.4, BCUC IR 1.8.1 and BCUC IR 2.3.1, Quality Service Metrics

- 1.1 Is it TGI's view that going forward its performance targets should, at a minimum, be at least as high as comparable "utilities industry average" targets, going forward?

Response:

Yes, Terasen believes that performance targets under the proposed customer care model implemented in 2013 and thereafter should, at a minimum, be comparable to "utilities industry average" targets. As discussed in BCUC IRs 1.8.1 and 2.3.1, Terasen Gas believes that service metrics are critical to ensuring ongoing service quality. Not only will these future service metrics be reflective of industry best practices, an ongoing process will be established to ensure that these metrics are reviewed and revised as required to reflect changing business needs and customer expectations.



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2.0 Reference: B-4, Amended Application, p. 4 and BCUC IR 2.7.3 Benefits to Customers and Willingness to Pay

2.1 In cases where benefits to customers do not "take the form of a cost savings," does TGI agree that it is preferable, when determining the net benefits of a proposal, to have a good estimate of customer willingness to pay (WTP) in respect of such benefits, for example as determined by a hedonic price estimate for the benefit in question, or by taking a sample survey?

Response:

The Project will bring service benefits to customers as discussed in Exhibit B-4, Section 4.5.2 and BCUC IR 1.13.1, 2.28.1, 2.28.17 and CEC 2.20.2, for example, at a long term cost that is *lower* than the cost of the Client Services Agreement (CSA) when calculated over a 20 year period.

Regardless, TGI believes that the proposition in the question may or may not be true depending on the circumstances. There will be any number of instances where a project that results in rate increases is nonetheless necessary and should be pursued in the interest of customers regardless of whether there is evidence of widespread "willingness to pay", e.g. infrastructure maintenance projects. In this case, evolving customer needs and expectations are a fundamental driver of the Project and customers' service requirements, including service options and contact channel preferences, were important considerations. As discussed in the response to BCUC IR 1.11.1, customer feedback through focus group research included in Exhibit B-4, Appendix F provides directional information that customers expect TGI to bring forward advances in customer care solutions. The quantitative customer survey included in Exhibit B-4, Appendix G highlights that most TGI customers expect additional service options to those offered today. For information regarding additional customer service offerings and customer "willingness to pay", please see the responses to BCUC IR 1.11.5 and 1.11.6. Please also refer to BCUC IR 1.12.2.

2.2 Please provide any materials, not already filed in this proceeding, that provide any guidance with respect to customers' WTP for benefits that do not take the form of a cost saving.



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Response:

Information regarding the service enhancements that will be delivered to customers as a result of the CCE Project and customer "willingness to pay" related to the improvements inherent in the Project is noted in the preceding response. As discussed in response to BCUC IR 1.11.5, TGI did not conduct research regarding "willingness to pay" for individual service enhancement components. The reasons for this are discussed in BCUC IR 1.11.5.

BCUC IR 1.11.5 also noted that the primary focus of the quantitative research included in Exhibit B-4, Appendix G (Angus Reid Strategies Customer Service Enhancement Report) was to understand customer expectations related to a variety of electronic service options and customer contact channel preferences. However, this research also included an investigation of customer "willingness to pay" related to the potential future introduction of automated meter reading. This was investigated as automated meter reading would be a significant change from customers' current experience with TGI and regional electric utilities as compared to service enhancements to provide services that Terasen Gas customers currently expect from TGI and receive from other organizations.

In response to the question, within the TGI and TGI 2010-2011 RRA proceedings, an identical information request was received related to customer "willingness to pay". The responses to those information requests included a discussion regarding customer adoption of, and willingness to pay for, new products and services. The information request and response to BCUC TGI RRA 2.15.2 is provided below.

"15.0

Reference: Operations and Maintenance Expense

Exhibit B-1, Part III, Section C, Tab 6, p. 376

Customer Care Enhancement Project, Appendix G, Angus Reid Strategies Report, p. 8

Customer and Stakeholder Behaviors and Expectations

"As a respected and trusted operator, Terasen Gas believes it must adapt and change to meet growing customer needs and expectations. We must take action to ensure that existing gas customers continue to receive the service they require and that it invests in activities to meet future customer needs."

"Actual readings and automated meters: The proposed initiation of automated meter reading will be welcomed by Terasen Gas customers, as the majority feel it is very important to get actual monthly gas



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readings and when moving in or out of a home. While they're not prepared to pay an additional surcharge for it, most would be interested in using automated meter reading to better understand their home energy." (Customer Care Enhancement Project, Appendix G, Angus Reid Strategies Report, p. 8)

15.2 *Has TGI conducted research regarding customers' willingness to pay for the service enhancements proposed in the Application?*

Response:

This question is identical to TGVI RRA/RDA BCOAPO IR 1.6.2. This response is similar to the TGI response to that IR, however some minor differences were necessary in order to respond appropriately for TGI.

Terasen Gas research has shown that there is a very strong customer preference for having access to further information on consumption. The breadth of research necessary to obtain an in-depth understanding of our customers' willingness to pay for possible information enhancements has not yet been conducted. However, Terasen Gas has commissioned market research from Angus Reid that has provided an initial indication that approximately one third of customers are already willing to pay extra for enhanced consumption information. Based on typical new product/service adoption rates, as discussed below, this initial level of acceptance is a favourable result. Moreover, the result suggests strong future adoption rates.

Research Suggests Strong Interest and an Indication of Willingness to Pay

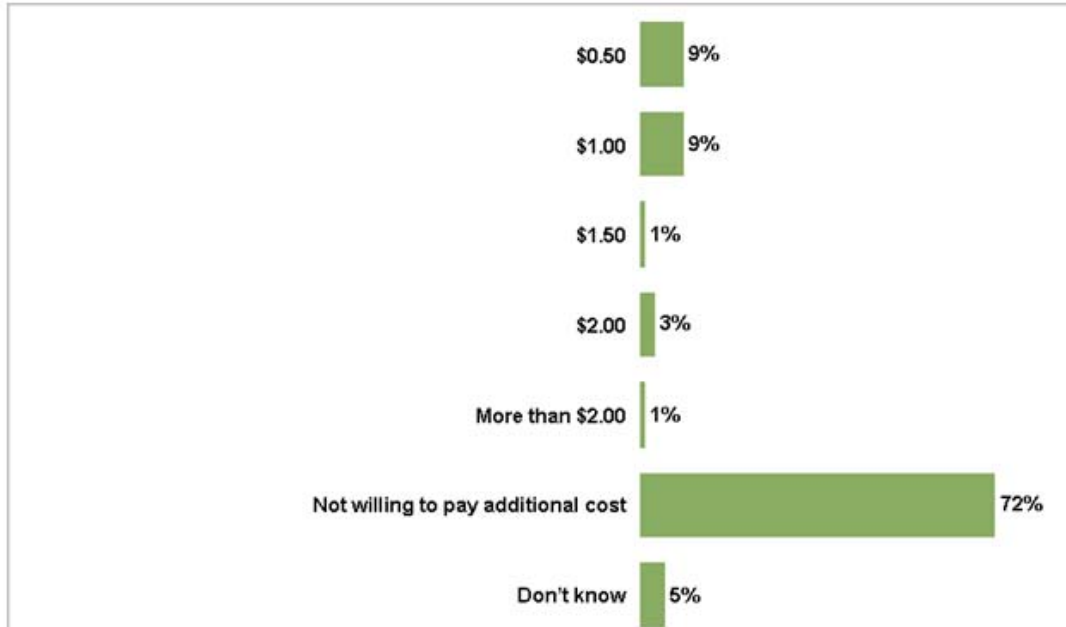
A recent study conducted for Terasen Gas by Angus Reid Strategies investigated residential customer interest in telephone and online self service information and transactional features and also inquired about customer interest in automated meter reading. This research indicates that almost 9 in 10 customers¹ expect access to enhanced consumption information. Nearly all customers want to reduce their monthly energy bill (7 in 10 strongly agree), while nearly 9 in 10 want to reduce their monthly energy bill and are concerned about their impact on the environment. The survey suggests that 28% of respondents (9% - \$.50/month, 9% - \$1.00/month, 1% - \$1.50/month, 3% - \$2/month, 1% - More than \$2.00/month) indicate they are willing to pay extra for the information. These results are shown below in Figure 1.

¹ Customer Service Enhancements, Final Report, February 27, 2009. Angus Reid Strategies, Slide 41, Question 22.



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Figure 1: Willingness to pay for automated meter reading²



Analysis of the Survey Results

The distribution of customers willing versus unwilling to pay for the enhanced information, is consistent with the adoption rates of other new technology. In fact, the early acceptance or willingness to pay on the part of such a significant minority is a strong indicator that broader customer acceptance will follow.

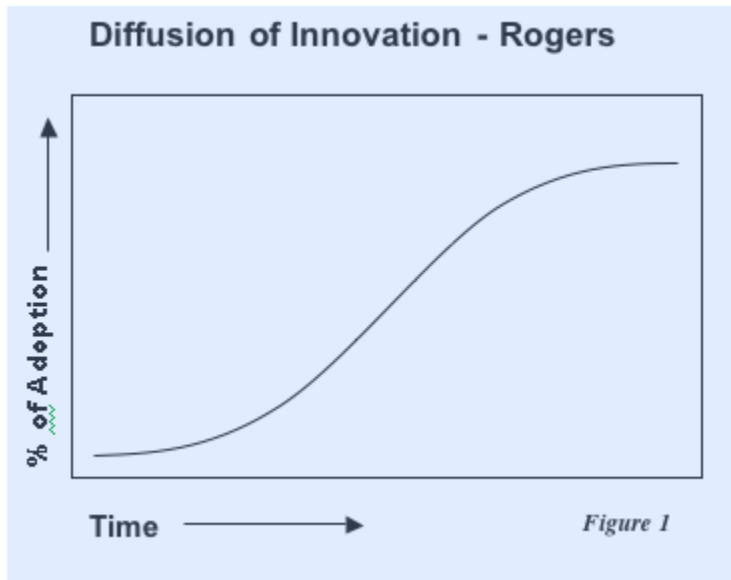
By way of explanation, the customers willing to pay for the enhanced information represent a market segment called "early adopters." The percentage of customers indicating a willingness to pay for the improved information is consistent with the diffusion of other new technology, services or products (Diffusion Theory). The most striking feature of diffusion theory is that, for most members of a social system, the decision to adopt a new technology depends heavily on the innovation-decisions of the other members of the system. "In fact, empirically we see the successful spread of an innovation follows an S-shaped curve. There is, after about 10-25% of system members adopt an innovation, relatively rapid adoption by the remaining members and then a

² Customer Service Enhancements, Final Report, February 27, 2009. Angus Reid Strategies, Slide 47, Question 27b.

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period in which the holdouts finally adopt.”³ It is important to note that the earlier adopters of an innovation profoundly affect the innovation-decisions of later adopters.

Figure 2: S-Shaped Curve Portrays Technology Adoption⁴



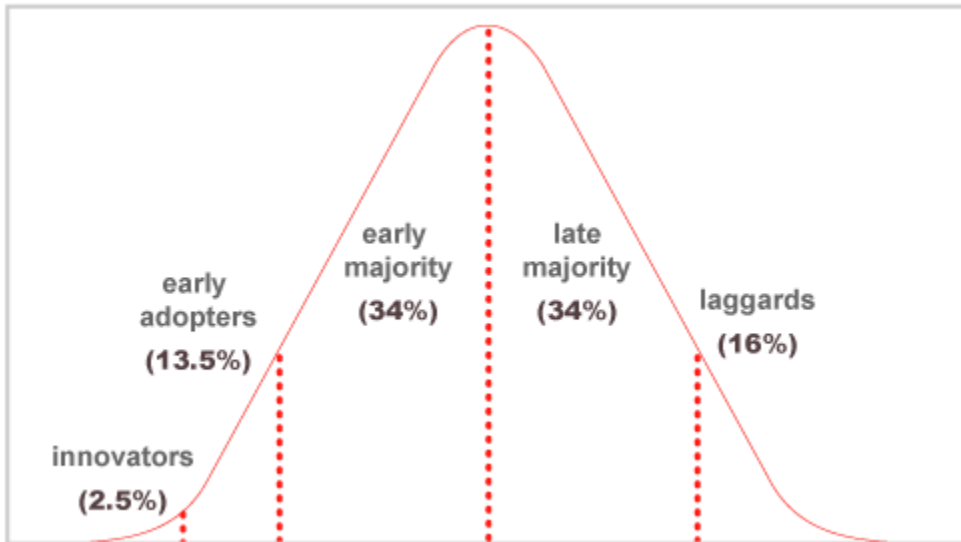
Scholars characterize adoption rates into five categories of system member innovativeness, where innovativeness is defined as the degree to which an individual is relatively earlier in adopting new ideas than other members of a system. These groups are: 1) innovators, 2) early adopters, 3) early majority, 4) late majority, and 5) laggards. Adoption rates for these sub-groups follow a bell curve as follows:

³ Diffusion of Innovations, Everett Rogers, March 18, 2003, www.stanford.edu/class/symsys205/Diffusion%20of%20Innovations.htm

⁴ D. Travers Scott, University of Washington <http://homepage.mac.com/dtraversscott/Academics/BlogHistory/Terms.html>

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Figure 3: Diffusion Model - Consumer Segments⁵



Innovators are eager to give the new product or service a try. The implementation and confirmation stages of the innovators' innovation-decisions are of particular value to the subsequent decisions of potential adopters.

Early adopters use the data provided by the innovators' implementation and confirmation of the innovation to make their own adoption decisions. If the opinion leaders observe that the innovation has been effective for the innovators, then they will be encouraged to adopt. This group earns respect for its judicious, well-informed decision-making, and hence this group is where most opinion leaders in a social system reside. Much of the social system does not have the inclination or capability to remain abreast of the most recent information about innovations, so they instead trust the decisions made by opinion leaders. Additionally, much of the social system merely wants to stay in step with the rest. Since opinion leader adoption is a good indicator that an innovation is going to be adopted by many others, these conformity-loving members are encouraged to adopt.

So a large subsection of the social system follows suit with the trusted opinion leaders. This represents a tipping point, where the rate of adoption rapidly increases. The domino effect continues as, even for those who are cautious or have particular qualms with the innovation, adoption becomes a necessity as the implementation of the innovation-decisions of earlier adopters result in social and/or economic benefit.

⁵ Proven Models, Diffusion of Innovations, www.provenmodels.com/570.



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The last adopters, laggards, can either be very traditional or be isolates in their social system. If they are traditional, they are suspicious of innovations and often interact with others who also have traditional values. If they are isolates, their lack of social interaction decreases their awareness of an innovation's demonstrated benefits. It takes much longer than average for laggards to adopt innovations.⁶

From the Internet to cell phones and Ipods, consumers never adopt new products and services at the same rate. The 28% percentage of customers indicating a willingness to pay for the service is consistent with Diffusion Theory. From this perspective, TGVI perceives the market segment currently keen enough to pay for the improved gas consumption tools as very positive, representing a substantial sub-group that acknowledges the societal importance of this investment. However, it should be cautioned that this investigation represents a cursory step towards a full pricing evaluation. In order to keep the overall survey of appropriate duration and scope, the question related to willingness to pay used a survey technique called the contingent valuation method (CVM). This method is designed to assist on matters of resource allocation. The process simply asks respondents how much they would be willing to pay for obtaining a particular good or service. However, a thorough pricing model "...needs input not only from economic theory, but also from several other disciplines, including sociology, psychology, statistics and survey research."⁷

Summary

In summary, almost all customers indicate that they desire enhanced natural gas consumption information. The information will help customers make better decisions about how they use natural gas in the home, and help them make decisions that are better for the environment. It is noted that the breadth of research necessary to obtain an in-depth understanding of our customers' willingness to pay for possible information enhancements has not yet been conducted. However, given the almost 3 in 10 market segment already willing to pay, the high customer preference for the enhanced consumption information and its congruity with generally accepted conservation objectives, TGVI believes providing customers with enhanced consumption information represents an necessary step to assist customers in the efficient and appropriate use of natural gas. The significant segment of "early adopters" will lead the way, adopting the new service first while others start using the information later as the benefits are acknowledged."

⁶ Diffusion of Innovations, Everett Rogers, March 18, 2003, www.stanford.edu/class/symsys205/Diffusion%20of%20Innovations.htm

⁷ Determining the value of non-marketed goods by Raymond J. Kopp, Werner W. Pommerehne, Norbert Schwarz. Springer, 1997. Page 235.



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3.0 Reference: BCUC IR 2.21.1, Cost Overruns

- 3.1 Would it be fair to summarize TGI's position on recovery of cost overruns from ratepayers by saying that all expenses incurred by TGI are recoverable except for cases where intervenors can prove *ex post* that TGI was imprudent *ex ante*?

Response:

TGI's position on the recovery of potential cost overruns from customers is that all costs prudently incurred during the implementation of a CPCN project are recoverable from ratepayers as part of the utility's cost of service. Shareholders are entitled to earn a fair return on investment, which includes prudently incurred costs associated with CPCN projects.

TGI believes that the correct test for determining prudence, as endorsed by the Commission in its Decision on BC Hydro's F2009/F2010 Revenue Requirements Application, is the two part test set out in Enbridge Gas Distribution v. Ontario (Energy Board). Under that test, costs incurred by a utility, whether they are within or outside of a project estimate, are presumed to have been incurred prudently, unless those challenging the costs demonstrate reasonable grounds to question the prudence of the costs incurred. If the person challenging the costs presents evidence to overcome this presumption of prudence (TGI does not believe that the existence of a cost overrun is, on its own, invariably going to be sufficient to rebut this presumption), then the utility must demonstrate that the costs incurred were reasonable under the circumstances that were known to, or ought to have been known to the utility at the time the costs were incurred.

The assessment of prudence can only be made after the fact, and normally will occur in a future revenue requirements application where the utility applies to increase rates to recover the cost overrun.

- 3.2 Please provide a list of CPCN projects over the last decade for which the BCUC later disallowed any portion of cost overruns incurred by TGI.

Response:

Over the last decade, TGI has implemented only one CPCN project that resulted in a cost overrun. In that specific case the Commission did not disallow any portion of the cost overrun. The costs associated with CPCN projects undertaken by TGI were prudently incurred and were appropriately recovered from ratepayers.



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4.0 Reference: BCOAPO 2.5.2

4.1 Footnotes 2 and 3 to the table provided in this response note that the Café project was a "complex custom build application" and the Distribution Mobile Solution Project was an "extremely complex project involving multiple vendors." These were the two projects listed whose contingency costs significantly exceeded the contingency amounts included in their initial project budgets. Please provide TGI's view with respect to the complexity of the current proposal as compared to the complexities of the Café and Distribution Mobile Solution Projects.

Response:

TGI believes that the SAP CIS project will be a complex project based on scope, scale and criticality of the application. From a purely technical perspective, however, it is of a lower technical risk than the other two projects.

Café was a one of a kind completely custom built application. Refer to the Amended Application, Section 4.1.2 CIS Software Options, pp 58 – 60, for a detailed discussion on the different complexities of a custom built vs. packaged software solution.

The Distribution Mobile Solution (DMS) on the other hand was a combination of packaged solutions and customization of some of those packages to achieve the desired end result. The real-time integration of the work order and time management components of SAP, the scheduling system from ClickSoftware and the creation and implementation of an SAP-centric mobile solution based on the multi-access gateway solution from Syclo LLP was technically complex. There was also a significant change management component as Terasen Gas already had almost 500 employees that were faced with the challenge of managing the current state while learning new technologies and processes

The proposed CIS project differs from the successful implementation of Café and DMS on a number of factors:

1. The CIS project is the implementation of the market leading CIS software package solution that has already been installed in over 600 utilities worldwide.
2. The integration with other key software enabled business processes (work orders, meter management, finance, etc) to support the business is greatly simplified as the majority of those solutions are already enabled by the same software solution (SAP).
3. Terasen Gas has over 10 years of experience with the SAP platform and has the majority of the operational processes in place and established.



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4. The key implementation partner, HCL Axon, is the largest (based on employees) and most experienced SAP system integrator in the world.
5. SAP has one of the largest software skilled resource markets in the world, thereby allowing Terasen Gas to gain access to resources to supplement its existing project team and /or maintenance organization if necessary.
6. The installation and operation of the new CIS environment will be a net new process for Terasen Gas employees. Therefore, the logistical and change management complexities with respect to running 2 systems in parallel during transition (e.g., learning a new system and new processes while concurrently operating a legacy system) and needing to meet existing service levels is significantly reduced as almost all impacted employees will utilize only the new system and processes.

In summary, the nature of the Café and Distribution Mobile Solution projects was fundamentally different than the proposed SAP CIS project. While the SAP CIS project will be complex based on scope, scale and criticality of the application, from a purely technical perspective, it is of a lower technical risk than the other two projects. It should be noted that in the case of the Distribution Mobile Solution, despite the challenges, the project still fell within the overall allowed contingency for the project.



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5.0 Reference: BCOAPO 2.5.2 and BCOAPO 2.10.1

5.1 Please confirm that the original project estimate for the Distribution Mobile Solution project excluding contingency funds was \$5,251,000 and total actual spending on the project was \$6,415,000.

Response:

Not confirmed. The comparison in the preamble does not use the same basis for comparison purposes. The original project estimate without contingency as identified in the preamble does not include the AFUDC cost estimate of \$318,000. The actual project spending identified in the preamble includes the actual AFUDC incurred (\$299,000). The tables below show the comparison with and without AFUDC.

Including AFUDC

Original Project Budget Without Contingency	Portion of Original Project Budget Representing Contingency	Original Project Budget	Additional Contingency as Per Commission Order	Total Revised Project Budget	Total Actual Spend
\$ 5,568,000	\$ 395,000	\$ 5,963,000	\$ 596,300	\$ 6,559,300	\$ 6,415,000

Excluding AFUDC

Original Project Budget Without Contingency	Portion of Original Project Budget Representing Contingency	Original Project Budget	Additional Contingency as Per Commission Order	Total Revised Project Budget	Total Actual Spend
\$ 5,251,000	\$ 395,000	\$ 5,646,000	\$ 564,600	\$ 6,210,600	\$ 6,116,000

The original project budget including AFUDC but excluding contingency was \$5,568,000. The key point to be made is that an adequate contingency is a necessary component of an overall project budget as risk mitigation against the unforeseen.

It is also important to note that for the Distribution Mobile Solution project, the Commission allowed for an additional 10% contingency to the total project budget (project estimate plus project contingency). This resulted in an overall project budget including AFUDC of \$6,559,000. Therefore, the Distribution Mobile Solution project actual spend was under the approved Commission budget requirement.