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October 28, 2009

British Columbia Utilities Commission  
6<sup>th</sup> Floor, 900 Howe Street  
Vancouver, B.C.  
V6Z 2N3

Attention: Ms. Erica Hamilton, Commission Secretary

Dear Ms. Hamilton:

**RE: Terasen Gas Inc. ("Terasen Gas", "TGI" or the "Company")  
Application for a Certificate of Public Convenience and Necessity for the  
Tilbury Property Purchase**

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Terasen Gas hereby applies to the British Columbia Utilities Commission ("BCUC" or the "Commission") pursuant to Section 45 of the *Utilities Commission Act, R.S.B.C. 1996, Chapter 473*, for a Certificate of Public Convenience and Necessity ("CPCN") for the purposes of purchasing the property known as the Northwest Hardwoods Site (the "Property") located adjacent to TGI's Tilbury Island LNG Facility (the "Application"). As described in the Application, the Property will be incorporated into the Tilbury LNG Facility operations for the purposes of preserving TGI's ability to continue operating in compliance with mandatory safety requirements. Customers obtain a material benefit from the continued operation of the Tilbury LNG Facility, and the acquisition of the Property represents a cost effective means of facilitating the ongoing delivery of that benefit to customers.

The Contract of Purchase and Sale is conditional upon Commission approval of the purchase being received by mid February 2010. TGI has proposed minimal review process that is intended to yield a Commission decision within that time frame. A minimal process is appropriate in light of the fact that the Property is being acquired for the purpose of complying with mandatory standards and that no stakeholder issues have been identified.

TGI requests that Appendices 2, 3, 5, 6, 8, 9, 10 and 11 of the Application be kept confidential, pursuant to the Commission's Confidential Filings Practice Directive. As described in Section 1.3 of the Application, these appendices contain: (a) market sensitive information that the vendor of the Property has requested remain confidential; (b) market sensitive information regarding the potential for TGI to generate revenues from the use of the Property to offset the cost of service impacts; and (c) risk assessments relating to the Tilbury LNG Facility that should remain confidential for security reasons. In accordance with the Practice Directive, TGI requests that intervenors wishing to review the confidential appendices execute an appropriate form of undertaking to maintain confidentiality.

Ten hardcopies of this Application, including the confidential appendices, will be submitted to the Commission. The Application including non-confidential appendices and all subsequent non-confidential exhibits will be made available on the Terasen Gas website under the Regulatory Submissions section for the Lower Mainland at the following link:

<http://www.terasengas.com/AboutUs/RatesAndRegulatory/BCUCSubmissions/default.htm>

If there are any questions regarding this Application, please contact the undersigned.

Yours very truly,

**TERASEN GAS INC.**

***Original signed:***

Tom Loski

Attachments

cc: Parties to the TGI PBR Settlement (e-mail only not including Confidential Appendices)



# **TERASEN GAS INC.**

## **Tilbury Property Purchase Application for a Certificate of Public Convenience and Necessity**

**October 28, 2009**

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**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  
TILBURY PROPERTY PURCHASE**

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

**1 APPLICATION**

Terasen Gas Inc. ("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 approval of a Certificate of Public Convenience and Necessity ("CPCN") for the purposes of purchasing the property known as the Northwest Hardwoods Site (the "Property") located adjacent to TGI's Tilbury Island Liquefied Natural Gas Facility (the "Tilbury LNG Facility" or "LNG Facility"). A draft order is included as Appendix 1. As described in this Application, the Property will be incorporated into the Tilbury LNG Facility operations for the purposes of facilitating continued compliance with mandatory safety requirements.

**1.1 Applicant**

**1.1.1 Name, Address, and Nature of Business**

TGI 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. TGI maintains an office and place of business at 16705 Fraser Highway, Surrey, British Columbia, V4N 0E8.

TGI is the largest natural gas distribution utility in British Columbia, providing sales and transportation services to residential, commercial, and industrial customers in more than 100 communities throughout British Columbia, with approximately 840,000 customers on the mainland including the Inland, Columbia, and Lower Mainland service areas. TGI's distribution

network delivers gas to more than eighty percent of the natural gas customers in British Columbia.

#### 1.1.2 Financial Capability of Applicant

TGI is capable of financing the Project either directly or through its parent, Terasen Inc. TGI 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 and Moody's Investors Service of BBB (High) and Baa2 respectively.

#### 1.1.3 Technical Capability of Applicant

TGI has designed and constructed a system of integrated high, intermediate and low-pressure pipelines and operates more than 38,000 kilometres of natural gas transmission and natural gas distribution mains and service lines in British Columbia. This transmission and distribution infrastructure serves approximately 840,000 customers on the mainland. TGI has operated the Tilbury LNG Facility in a safe and reliable manner since it was commissioned in 1971.

#### 1.1.4 Name, Title, and Address of Company Contact

Tom A. Loski.  
Chief Regulatory Officer  
Terasen Gas Inc.  
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#### 1.1.5 Name, Title, and Address of Legal Counsel

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## **1.2 Executive Summary**

The Company seeks a CPCN for the acquisition of the property known as the Northwest Hardwoods Site, which is currently owned by Weyerhaeuser Company Limited ("Weyerhaeuser") and consists of 22.8 acres of freehold land immediately adjacent to the Tilbury LNG Facility. An easement permitting the use of an adjacent 4.3 acres (for a total of 27.1 acres) is appurtenant (attached) to the Property. TGI has entered into a Contract of Purchase and Sale dated September 4, 2009 (the "Contract") amended by the Modification and Ratification Agreement dated October 23, 2009, which is conditional upon Commission approval. Once acquired, the Property will be incorporated into the Tilbury LNG Facility operations, giving TGI greater control of the use of the property and acting as a buffer to help ensure continued compliance with mandatory safety standards.

TGI's ability to continue to operate the Tilbury LNG Facility, which requires continued compliance with safety standards, is in the interest of customers. The LNG Facility is a key component of the TGI Coastal Transmission System (the "CTS") providing both capacity and security of supply benefits in particular during extreme or extended cold weather events. The Tilbury Facility helps to mitigate temporary but potentially significant operational problems associated with the pipeline infrastructure supplying the Terasen systems. It is also a valuable peaking gas resource in TGI's midstream gas portfolio. It allows re-delivery during extreme or extended cold weather events, essentially providing an additional shaped supply resource. As the LNG Facility is located downstream of the Huntingdon-Sumas trading point, it also helps to alleviate the risk of increasing prices and price volatility at the trading point during peak demand periods.

Since its commissioning in 1971, the LNG Facility has been in operation with an excellent safety record. TGI is required by legislation to operate the LNG Facility in accordance with Canadian Standards Association standard CSA Z276-2007 ("CSA Z276" or "CSA Z276-07"). To remain in compliance with CSA Z276 and continue to operate, the Tilbury LNG Facility must not represent a significant risk to life or to adjoining property.

Periodic comprehensive risk assessments commissioned to date have concluded that the Tilbury LNG Facility meets CSA Z276 because it does not pose a significant risk to life or



adjoining properties. However, this conclusion is based on current land use. Current zoning of adjacent properties, including the Property, permits higher occupancy than has been used by the owners of the properties to date. A change in use of the Property and, in particular, any change that would result in an increase in the number of people occupying the site, will change the risk profile of operating the Tilbury LNG Facility. A change in use could jeopardize TGI's ability to maintain acceptable risk levels in the future, which could necessitate very significant and costly infrastructure investments at the Tilbury LNG Facility to ensure ongoing regulatory compliance. TGI has proactively worked with adjacent landowners to influence their land use decisions, but TGI has no means of dictating the land use. TGI has concluded that the most prudent and effective way to mitigate this risk is to purchase the Property and control its future use. Current market conditions and the closure of the Northwest Hardwoods plant in 2008 present an opportunity to acquire the Property for a reasonable price, with the current owner accepting responsibility for providing environmental remediation to the site and obtaining a Certificate of Compliance ("CoC") from the Ministry of the Environment confirming environmental remediation to applicable standards prior to TGI acquiring the Property.

The Contract is conditional on receiving satisfactory Commission approval within 120 days of October 23, 2009 in order to provide both parties the certainty that the purchase will proceed provided that the remaining conditions are satisfied. The actual purchase closing date is dependant on the receipt of the environmental Certificate of Compliance, which could require up to two years from the execution date of the Contract of Purchase and Sale. Since the closing date is uncertain, TGI is proposing that the costs be added to TGI's rate base and cost of service in 2012. In the interim, TGI requests that the capital costs of the Tilbury Property purchase remain in a non-rate base deferral account and attract AFUDC. Property taxes that TGI will be responsible for after the Contract closing date will accumulate in TGI's existing Property Tax Deferral Account. The remaining incremental revenue requirement items such as O&M expenses will accumulate in the same non-rate base deferral account as the land until the Property is added to rate base and included in the year-to-year revenue requirements of TGI. TGI anticipates that the Tilbury Property Purchase incremental revenue requirement will flow into rates in 2012 at which point the land costs will be added to rate base and other deferred costs will be amortized over three years.. The incremental annual revenue requirement is expected to be approximately \$1.9 million which is equivalent to approximately 1.2 cents per

GJ. TGI believes that the investment required to purchase the Property is necessary and in the best interest of customers.

### **1.3 Regulatory Review of CPCN Application**

TGI has entered into a Contract of Purchase and Sale dated September 4, 2009 for the Property that is subject to Commission Approval being obtained within 120 days of October 23, 2009, the date of the Modification and Ratification Agreement. In order to meet that timing, TGI respectfully requests that the Commission complete its process to review this Application and issue a decision by mid February 2010. TGI requests a minimal process for the review of the Application.

TGI believes that a minimal process is appropriate for this Application principally for two reasons. First, the land purchase is driven primarily by the need to ensure the continued safe operation of the existing Tilbury LNG Facility. Second, this will best permit the process to be concluded, and a decision rendered, within the 120 day timeline contemplated by the Contract of Purchase and Sale as amended by the Modification and Ratification Agreement for obtaining Commission approval.

TGI has made a conditional offer to purchase the property. As the Contract of Purchase and Sale will not close until all subject clauses are satisfied, the vendor has requested that the purchase price be kept confidential as it is sensitive market information. Also, TGI is concerned that release of certain information could jeopardize the security of the LNG Facility and could negatively impact assessment of future use of the Property. Accordingly, in conjunction with this Application, TGI has filed several Appendices separately, in confidence. The Confidential Appendices include:

- (a) *The Contract of Purchase and Sale (Confidential Appendix 2), and a Confidential Information Memorandum prepared by Colliers International, the agent of the vendor (Confidential Appendix 3).* The details of the Contract of Purchase and Sale are market sensitive. The vendor, Weyerhaeuser, has requested that the details, including the purchase price, remain confidential. The specific reason for Weyerhaeuser's request, as TGI understands it, is that if TGI does not obtain Commission approval, Weyerhaeuser's negotiations with future potential purchasers would be adversely affected by the publication of this information. Colliers has expressly reserved the confidentiality of its Confidential Information Memorandum.

- (b) *The two independent risk analyses relating to the LNG Facility (Confidential Appendices 5 and 6).* TGI requests confidential treatment of these reports for security reasons, as these risk analyses contain information related to the construction and design of the LNG Facility.
- (c) *CB Richard Ellis (CBRE) Opinion of Value (Confidential Appendix 8).* TGI commissioned a valuation opinion by CBRE in respect of both (i) the market value of the whole Property, and (ii) the market value of the portion of the Property across Tilbury Road in the event that TGI is able to subdivide off that portion and sell it (with the proceeds as a credit to rate base and cost of service). This document should remain confidential while the Contract of Purchase and Sale remains conditional. The release of information regarding the market value of the subdivided portion could impair negotiations with potential future purchasers of that land.
- (d) *Financial Schedules (Confidential Appendix 9).* The calculations in these schedules include the purchase price and need to be kept confidential for the reasons explained in (a).
- (e) *CBRE assessment of potential rental income (Confidential Appendix 10).* TGI has obtained a report by CBRE relating to market potential for renting the Property as storage space (with the proceeds as a credit to the cost of service). This document is market sensitive, and its publication could impair TGI's negotiations with potential renters.
- (f) *Confidential Addendum to the Application (Confidential Appendix 11).* This document highlights particular aspects of the above confidential documents, for ease of reference.

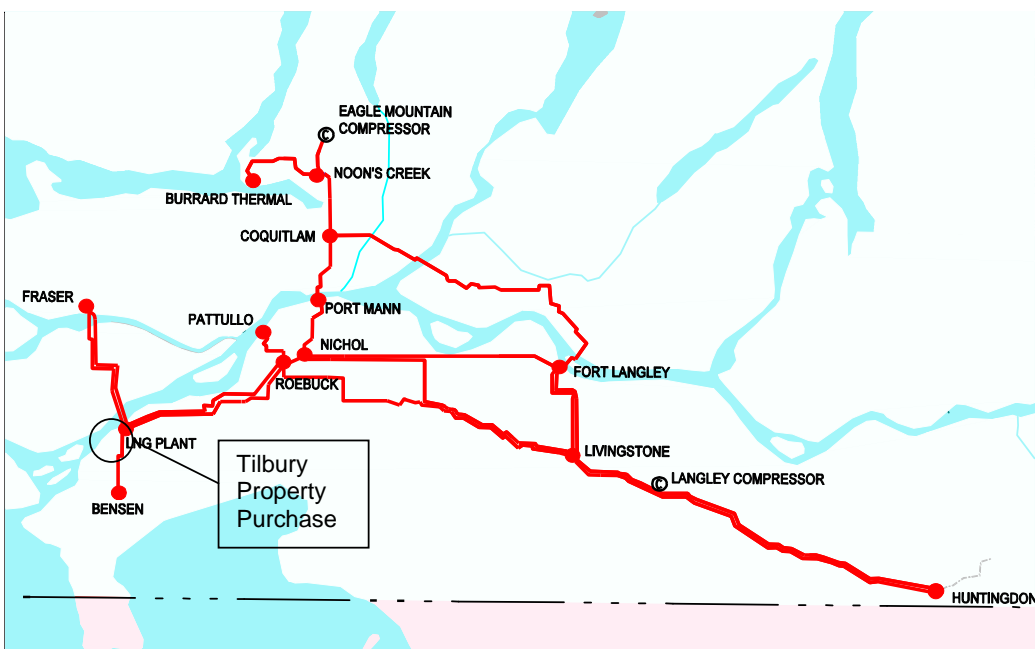
In accordance with the Commission's Practice Directive, intervenors wishing to review the Confidential Appendices should be required to execute an appropriate form of undertaking to maintain confidentiality.

## 2 Background

The Tilbury LNG Facility was designed and built in 1969 - 1971. Since its commissioning in 1971, the LNG Facility has been in operation with an excellent record of safety and reliability. The Facility provides an important peaking service in the TGI gas supply portfolio, while also providing an important on-system capacity resource for the Coastal Transmission System. It allows re-delivery during extreme or extended cold weather events, essentially providing an additional shaped supply resource. As the Tilbury LNG Facility is located downstream of the Huntingdon-Sumas trading point, it helps to alleviate the risk of increasing prices and price volatility at the trading point during peak demand periods. The LNG Facility also provides benefits related to security of supply, reliability and flexibility to serve loads within TGI's system. The related capacity and gas supply benefits are important when mitigating potential temporary operational issues associated with pipeline infrastructure supplying TGI's customers.

The Tilbury LNG Facility is located on Tilbury Island in Delta, BC. Figure 2-1 shows the location of the LNG Facility relative to the Coastal Transmission System and Figure 2-2 shows the layout of the LNG Facility.

**Figure 2-1 - Coastal Transmission System and the Location of the Tilbury LNG Facility**



**Figure 2-2 – Aerial View of the Tilbury LNG Facility (July 2009)**



### 3 Project Description

TGI seeks a CPCN for the acquisition of the Property located to the South West of the existing Tilbury LNG Facility. The Property will be incorporated into the operations of the Tilbury LNG Facility giving TGI greater control of the use of adjoining lands and acting as a buffer to help ensure continued compliance with mandatory safety standards.

TGI and Weyerhaeuser have entered into a Contract of Purchase and Sale dated September 4, 2009 that is subject to satisfaction of a number of conditions, including (a) Commission approval of this CPCN application, and (b) Weyerhaeuser obtaining a Certificate of Compliance from the Ministry of the Environment confirming that provincial environmental standards in respect of the remediation of the Property have been met. The Contract of Purchase and Sale amended by the Modification and Ratification Agreement is included as Appendix 2 (Confidential).

The Property is located at 6939, 7150 Tilbury Road, and 7505 Hopcott Road, in the Tilbury Industrial Area of Delta, BC. The Property consists of 22.8 acres immediately to the South and West of the TGI Tilbury LNG Facility described as LOT 2 EXCEPT; PART DEDICATED ROAD ON PLAN LMP42736, DISTRICT LOT 135 GROUP 2 NEW WESTMINSTER DISTRICT PLAN 85922 (PID: 016-198-506). An easement over 4.3 acres immediately North and West of the Property (that part of LOT 1, DISTRICT LOT 135 GROUP 2 NEW WESTMINSTER DISTRICT PLAN 85922 (PID 016-198-492) in Easement Plan BCP25784) is appurtenant to it. The easement was granted in perpetuity with an option for the easement holder to purchase the land that is the subject of the easement ("Easement Area") for \$10.00 upon the subdivision of currently vacant parcel of land immediately South West of the Property.

Figure 3-1 shows the Property and Easement Area. The Property is currently subject to the Corporation of Delta's Heavy Industrial zoning designation (I-2) that allows uses in both the Heavy and Light Industrial (I-1) zoning categories. Appendix 7 includes details regarding the applicable zoning.

The Property has been the site of a hardwood mill since 1974. The mill has recently been shut down and Weyerhaeuser now wishes sell the Property. It was put on the market for sale in September 2008.



Detailed information regarding the Property is included in a Confidential Information Memorandum prepared by Colliers International, the agent of the vendor, as Appendix 3 (Confidential). The Memorandum includes information related to an area and market overview, property description, Delta's official community plan, development potential, status of the site, topography, environmental and geotechnical investigations, title analysis, and a BC economic overview.

**Figure 3-1 – Tilbury Property Location**



## 4 Project Justification

### 4.1 Introduction

LNG standards have evolved since the original construction of the Tilbury LNG Facility and TGI has relied on the Retroactivity Clause in CSA Z276 to demonstrate compliance with the current CSA Z276 standard. The development of the Property to a higher density use will change the risk profile of the LNG Facility and potentially impact TGI's ability to continue to demonstrate compliance using the Retroactivity Clause. Purchasing the Property is the only effective way to control the use of the Property. The Contract of Purchase and Sale represents an important opportunity to facilitate ongoing compliance with CSA Z276. While not the principal motivation for the acquisition, the Property could also provide a potential benefit related to the future potential expansion of the Tilbury LNG Facility, and could possibly be used for buffer storage for LNG for Transportation.

### 4.2 Mandatory Requirements in CSA Z276

TGI, in operating the Tilbury LNG Facility, is obligated to comply with CSA Z276 pursuant to Section 12(3) of the Pipeline Regulation, which states: "Except as otherwise provided in this regulation, liquefied natural gas facilities which are part of a gas pipeline system, must comply with CSA Standard Z276."<sup>1</sup> TGI's ongoing compliance with CSA Z276 depends on TGI being able to satisfy the risk criteria established in the Retroactivity Clause in CSA Z276.

#### 4.2.1 Evolution of CSA Z276 With Respect To Siting of LNG Facilities

The mandatory standards related to LNG facilities have evolved since the construction of the Tilbury LNG Facility. The LNG Facility was designed and constructed in accordance with the requirements of the first edition of the US National Fire Protection Association ("NFPA") LNG Standard 59A-1968. At that time, a Canadian LNG Standard had not yet been developed. In 1972, the CSA adopted NFPA 59A-1971 as the first edition of CSA Z276 to govern the design, construction and operation of LNG facilities in Canada.

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<sup>1</sup> B.C. Reg. 360/98. The *Pipeline Regulation* is issued under the *Pipeline Act*, R.S.B.C. 1996, Chapter 363.



The CSA Z276 requirements have become more detailed and more prescriptive over the years. While the early editions of the standard included minimal siting requirements for an LNG facility, the 1981 edition introduced more rigorous requirements to limit risks within the LNG Facility and beyond the LNG Facility property line due to vapour dispersion and radiant heat resulting from the ignition of an LNG spill. Specifically, Clause 5.2.3.3 of CSA Z276-07 requires the flammable mixture of natural gas from the vapour dispersion of an LNG spill to be limited to the LNG Facility property line. Also, Clause 5.2.3.2 of CSA Z276-07 requires a series of radiant heat setback zones to surround an LNG facility. The size of the setback zones is determined in accordance with CSA Z276 based on the dimensions of the impoundment which surrounds the LNG tank. These setback zones are required to ensure that facilities such as public gathering places and public buildings, in existence at the time of facility siting, are located at a specified distance from the LNG facility to manage potential impact should a fire result within the impoundment area. The wording of Clauses 5.2.3.2 and 5.2.3.3 can be found in Appendix 4.

#### 4.2.2 Retroactivity Clause in CSA Z276

As standards such as CSA Z276 evolve, facilities may no longer meet all of the prescriptive requirements in the revised standards. To ensure such facilities remain safe and fit for continuing service, many standards include a Retroactivity Clause. Clause 4.2 of CSA Z276-07, the Retroactivity Clause, states in part:

*The requirements of this Standard are applicable to the operations, maintenance, and upgrading of existing installations; however, unless otherwise specified, it is not intended that existing installations be required to conform retroactively to the requirements of this Standard with regard to design and construction.*

*Where existing plants, equipment, buildings, structures, and installations meet the applicable design, fabrication, or construction layout provisions of the edition of this Standard in effect at the time of approval or installation, they may remain in use, provided that they do not constitute a significant risk to life or adjoining property. [Emphasis added.]*

Clause 4.2 in its entirety can be found in Appendix 4.<sup>2</sup>

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<sup>2</sup> CSA rules preclude the reproduction or inclusion of the entirety of CSA-Z276 in this Application, but CSA has allowed the inclusion of the portions reproduced in the Appendix.

TGI has undertaken two comprehensive risk assessments in order to demonstrate that the LNG Facility is in compliance with the Retroactivity Clause provisions of CSA Z276. The risk assessments are discussed in the next section.

### **4.3 Risk Assessments**

TGI has previously commissioned two comprehensive risk assessments, the first completed in 1981 by ERCO and the second completed by ACRES in 1999. The two risk assessments are included in Appendix 5 (Confidential) and Appendix 6 (Confidential), respectively.

Risk can be defined, in general terms, as the probability of failure multiplied by the consequence of failure. For an LNG facility, the most significant failure is a failure of the main storage tank or the LNG withdrawal line between the tank and the first block valve resulting in a spill of LNG into the impoundment area. For the Tilbury Facility, the most likely cause of failure is a seismic event. The most significant consequences relate to vapour dispersion and radiant heat resulting from the ignition of an LNG spill. (As noted in Section 4.2.1, CSA Z276 Clauses related to vapour dispersion and radiant heat are included in Appendix 4. Clause 7.1.3 Seismic Design is also included in this Appendix.)

Numerous safety-related improvements were made in response to these risk assessments to ensure the continued compliance of the Tilbury LNG Facility with the Retroactivity Clause.

Following the 1981 risk assessment, extensive ground improvement was made around the tank to improve its response to a seismic event. To reduce the consequences of a spill, a reinforced concrete high dike was constructed close to the tank and much of the LNG carrying equipment was relocated within the new dike. These improvements, completed in 1984, resulted in a smaller LNG impoundment area which effectively reduced the sizes of setback zones for limiting vapour dispersion and radiant heat from an LNG spill.

Improvements following the 1999 risk assessment included a thorough inspection of the inner tank to check for potential failure mechanisms, realignment of the tank outlet line to ensure adequate seismic response capability, the installation of an inner tank valve to reduce the size of an LNG spill, and the extension of a high expansion foam system to cover the complete annular space between the high dyke and the LNG tank. The foam system reduces the extent

of vapour dispersion from an LNG spill and the intensity of radiant heat from a fire resulting from the ignition of a spill. With these improvements, the prescribed dispersion limits at the LNG Facility property line were met but the radiant heat setback zones were not met in all cases. However, the assessment concluded that the radiant heat risk was within the range of risks generally considered acceptable for similar industrial facilities, thus satisfying the Retroactivity Clause requirement.

Changes in land use surrounding the LNG Facility, particularly where the occupancy increases, can also increase the consequence from the same failure, which, in turn, affects the overall risk profile of the LNG Facility. As discussed in Section 4.4, Tilbury Island has undergone significant development since the Tilbury LNG Facility was constructed in 1971.

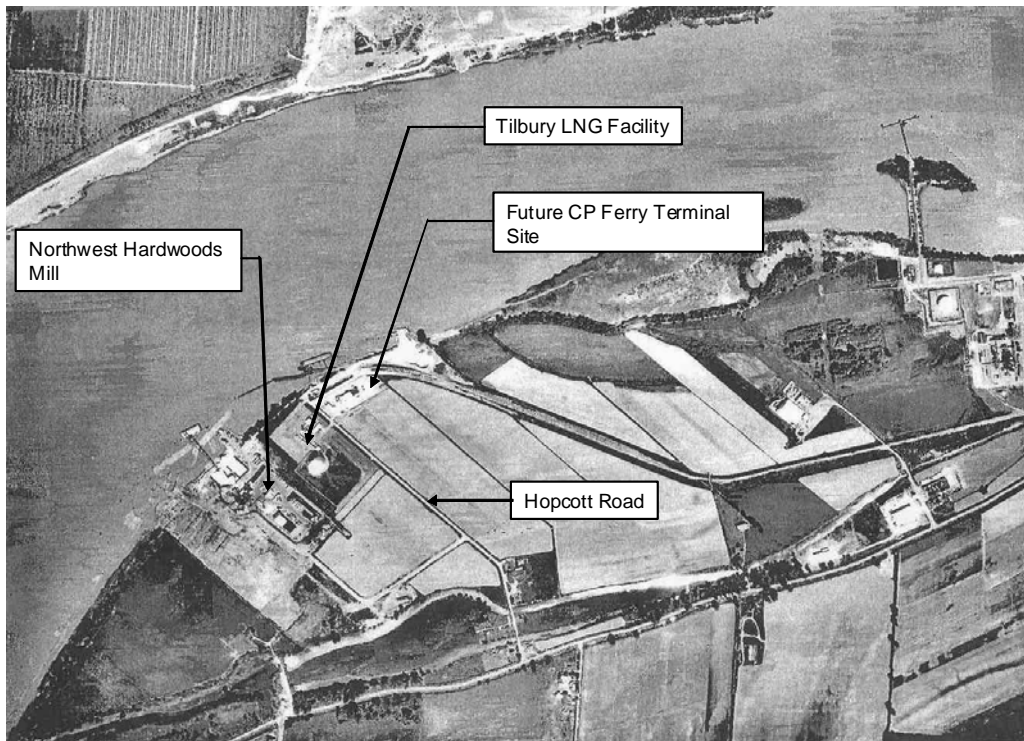
The 1999 risk assessment was based on the adjacent land use at the time and TGI is very concerned that the closure of the Weyerhaeuser plant and a change in land use resulting in higher occupancy of this property would increase the risk profile of the LNG Facility. A material increase in risk could invalidate the 1999 risk assessment conclusion and necessitate either a very significant investment by TGI, or even closure of the LNG Facility.

## **4.4 Land Use of Third Party Properties**

### **4.4.1 General**

The land use in Tilbury Island has undergone significant change since the Tilbury LNG Facility was constructed. Prior to 1960 Tilbury Island was primarily farmland although the North East end of the Island began to see industrial development with the construction of the Chatterton Chemical Plant in the 1960's. Further development occurred in the 1970's with the construction of the Tilbury LNG Facility in 1971, the Northwest Hardwoods Mill and a rail spur terminating at the North West end of the current CP terminal property. A 1974 aerial view of Tilbury Island is shown in Figure 4.4.1-1.

**Figure 4.4.1-1 1974 aerial view of Tilbury Island**



Since 1974, Tilbury Island has undergone significant additional industrial development. Figures 4.4.1-2 and 4.4.1-3 illustrate the light and heavy industrial development that has occurred on both sides of the Tilbury LNG Facility.



**Figure 4.4.1-2 - View of the CP Terminal and the light and heavy industrial development on the North East end of Tilbury Island (Circa 2005).**



**Figure 4.4.1-3 - View of the Northwest Hardwood Site and light industrial development on the South West end of Tilbury Island (July 2009)**



Figure 4.4.1-3 shows the light industrial development at the South West end of the Island (i.e. beyond the LNG Facility in the photograph). TGI is concerned that if steps are not taken to control the land use of the Property, this type of development will occur right up to the South West property line of the LNG Facility. As stated previously, this would change the risk profile of the Tilbury LNG Facility and could result in future non-compliance with CSA Z276.

The history of the land development of the two properties immediately adjacent to the Tilbury LNG Facility is discussed below.

#### 4.4.2 Canadian Pacific ("CP") Site

The property now occupied by CP to the North East of the Tilbury LNG Facility (the "CP Site") was put up for sale in 1993. TGI made an attempt to acquire the CP Site, but it was eventually purchased by CP who relocated their Transportation of Dangerous Goods ferry operation from Vancouver harbour to this site.

Following the sale of the property in 1993 to CP, TGI continued to be concerned with respect to intended use of the property and met with CP to discuss the radiant heat risk from the Tilbury Facility and CP's plans for the CP Site. CP advised that they planned to construct an administration building close to Hopcott Road but, following this discussion, they agreed to construct their building further away from Hopcott Road. TGI paid for the incremental cost associated with this new location. The rest of the property was to be used primarily for storage of trailers and cargo. This use was considered acceptable from a risk perspective, as validated by the second risk assessment.

#### 4.4.3 Northwest Hardwoods Site (the "Property")

The hardwood mill located on the Property (to the South West of the Tilbury LNG Facility) had been in operation from 1974 until it was recently decommissioned in 2008. Over the years, TGI had met with the mill owners on several occasions to discuss land use and occupancy due to concerns regarding LNG Facility risks. Throughout this period, there were a limited number of people occupying the Property at any one time. These mill employees were not normally

working very close to the plant property line. Therefore, this use was considered acceptable from a risk perspective, as validated by the second risk assessment.

The conclusions of the second risk assessment are based on the use of the Property as a hardwood mill. Any change in land use and, in particular, any significant increase in the number of people occupying the Property, will increase the risk profile of the LNG Facility and could jeopardize TGI's ability to comply with CSA Z276 without considerable additional cost.

The existing I2 zoning of the Property includes both Heavy Industrial Uses and all of the Light Industrial Uses included in I1 zoning. The Official Community Plan identifies the Property as being within the Riverside Industrial and Industrial designation zone. The zoning specifications are included in Appendix 7. The potential for the Property to be used for Light Industrial Uses is of significant concern for TGI. Light industrial uses include the following:

- Automotive equipment repair and body shops;
- The sale, repair and rental of machinery and heavy equipment, trailers, mobile homes, recreation vehicles and pleasure boats, household appliances;
- "Office operation", including financial institutions;
- Eating and drinking establishments;
- Smoke shops and grocery stores to a maximum "Floor Area" of 140 square metres;
- Laundry and dry cleaning establishments;
- Auction rooms;
- Trade schools; and
- Taxi dispatch office and parking and maintenance of taxis.

These uses, and the others identified as permissible uses, might involve a significantly higher occupancy than the mill operated by Weyerhaeuser until 2008. Land subject to the same zoning at the west end of Tilbury Island has been used for the purposes of an office park. Were the Property to be used for a similar purpose, the risk assessment for the LNG Facility could change materially.

## **4.5 Acquisition of the Northwest Hardwoods Site**

### **4.5.1 Current Opportunity to Purchase the Property**

The vendor decommissioned the Northwest Hardwoods mill located on the Property and made it available for sale in 2008. TGI evaluated the benefits of acquiring the land; however, the vendor accepted a conditional offer from another purchaser at that time that was subsequently unsuccessful. In the spring of 2009, the vendor then approached TGI regarding the sale, which ultimately resulted in the current Contract.

Acquiring control of the land use within the setback zones South West of the LNG Facility will allow TGI to prevent any substantial increase in occupancies. An expanded site will also allow TGI to continue to help ensure the Tilbury LNG Facility meets the CSA Z276 Retroactivity Clause should governing issues change in the future. Such potential issues include changes to regional seismicity and more prescriptive requirements in CSA Z276. In the case of CSA Z276, the siting requirements have become more stringent since the Tilbury LNG Facility was commissioned and further changes could reasonably be expected in response to increasing public interest in and awareness of LNG resulting from the expanding use of LNG in Canada and around the world.

The worldwide economic recessionary climate, the slowdown in the forest industry, and the current real estate market in the Lower Mainland, particularly for industrial and commercial properties, all combined to create an opportunity to purchase the Property at a reasonable price based on current market conditions.

It is unlikely that the opportunity for TGI to acquire such a large contiguous parcel of land adjacent to the Tilbury LNG Facility would arise again in the foreseeable future. The Property is zoned for heavy and light industrial use, and is very likely to be redeveloped in a manner comparable to the Western end of Tilbury Island. With the completion of the South Fraser Perimeter Road in 2012, which will provide a nearby arterial transportation route, the Property would be in prime demand for development and subdivision when economic development increases again in the future.



#### 4.5.2 Alternatives Analysis: Risk of Not Proceeding

As noted in Section 4.3, TGI has made numerous improvements to the Tilbury Facility to reduce the risks associated with the Facility and to demonstrate compliance with the CSA Z276 Retroactivity Clause. TGI has not identified any additional cost effective improvements, other than those already made, that are available to further mitigate risks on the existing site, in the event that TGI does not purchase the Property and it is redeveloped such that the results of the risk assessment are no longer valid.

If TGI does not purchase the Property and the Property is developed such that the Tilbury Facility is no longer in compliance with CSA Z276, then TGI will be in a difficult situation. It would be required to either replace the existing tank, attempt to mitigate the risk reactively after the Property was sold, or even decommission the LNG Facility. TGI does not believe these options are in the best interest of customers.

One alternative that would achieve the same level of service would be a complete replacement of the existing LNG storage tank; this option is extremely costly in comparison to the proposed Property purchase. A very different tank design (likely a full containment tank) would be necessary to maintain compliance with CSA Z276. Assuming that such a tank could be sited on the existing property, a preliminary estimate for this alternative is \$90 million. This estimate is based on discussions with CB&I -- the contractor TGI has engaged for the Mt. Hayes LNG Facility project on Vancouver Island. As this cost is significantly higher than the proposed land purchase, further detailed analysis would not impact this Application.

TGI does not believe it is prudent to wait for third party development to occur, and react by attempting to acquire the appropriate setbacks at a later date. We cannot predict the nature or extent of future development on the site if it is acquired by a third party or the cost of mitigating the impact of the development. TGI would inevitably be in a weak position, and be taking on compliance and operational and risks with more costly mitigation measures (if they were even available).

If the development in the area reached an unacceptable level (and a replacement tank was not installed), it could potentially result in a decision to decommission the Tilbury LNG Facility. This would result in the following impacts:

- **Security of Supply, Reliability, and Operational Flexibility:** The Tilbury LNG Facility provides a range of benefits that contribute to security of supply, reliability and operational flexibility including:
  - The mitigation of potential temporary operational problems associated with the pipeline infrastructure supplying the Terasen systems. A recent example of this occurred in November, 2006, when the pressure on the Westcoast system fell below the 500 psig minimum contracted level to 468 psig due to upstream operational problems. This caused supply cuts for all shippers on the Westcoast system, including TGI which is the largest shipper on that system. TGI used the Tilbury LNG plant, which is normally reserved for peaking supply, to cover a large shortfall and managed to keep its customers whole during this time, while also keeping system pressures elevated. This situation could have had significant consequences for TGI and its customers and this was largely avoided as a result of having a large volume on-system resource such as the Tilbury LNG Facility.
  - The availability of the Tilbury LNG Facility also provides alternate system capacity and supply to customers in the event of capacity reduction or interruption due to operational problems, pipeline damage, or maintenance on the Coastal Transmission System (the "CTS").
  - Operational flexibility and efficiency benefits are realized by the provision of an additional resource for balancing and quick response to upset conditions. In the event of an off-system supply shortfall where late night re-deliveries by third parties may not be readily available, the Tilbury Facility can be ready to send out in as little as 12 hours between March 1<sup>st</sup> and October 31<sup>st</sup> and as little as 2 hours between November 1<sup>st</sup> and February 28<sup>th</sup>.
  
- **Gas Supply Portfolio:** The loss of the Tilbury peaking supply would result in a negative impact on gas supply costs.. The alternative replacement supply resources would be a combination of peaking supplies from the Sumas hub in the Lower Mainland, and baseload supplies from the Station 2 trading point through Westcoast Pipeline to the Lower Mainland. Depending on the optimized combination of alternative supply resources chosen, and accounting for the varying supply mix available from year to year, replacement costs for the Tilbury LNG Facility peaking supply are estimated to range from \$9 to \$11 million per year.

There are also implications related to the loss of capacity used to serve the combined regional loads at Sumas, and potentially increased cost of peaking gas and redelivery in the future due to a tighter market at Sumas. The absence of Tilbury LNG would increase the risk of significantly higher winter prices at the Huntingdon-Sumas trading point during a cold winter and higher market premiums for that supply, and increased price volatility at the trading point during peak demand periods. The ability to provide re-delivery during extreme or extended cold weather events would also be affected.

- **System Capacity:** In addition to the above-discussed benefits related to system reliability and flexibility, the absence of the Tilbury LNG Facility would also have an impact on system capacity on the CTS during high demand periods. The CTS serves as the backbone for distribution systems serving the core market demands in the Lower Mainland, as well as BC Hydro at Burrard Thermal and TGV1 at Eagle Mountain in Coquitlam. The LNG Facility provides 150 mmscfd of sendout capacity and also provides pressure support to the CTS, which is a significant benefit during high demand periods. Additionally, to continue to meet expected customer demand in the long-term without the Tilbury LNG Facility, system upgrades would be required. For example, in order to handle lower inlet pressures, an immediate improvement to the Fraser Gate station at an approximate cost of \$1 million would be required. Other gate stations would require similar improvements although the timing and cost has not been established. In addition, to fully replace the system capacity provided by Tilbury, the CTS pipeline loop from Nichol to Coquitlam would need to be advanced. (See Fig. 2-1).

TGI therefore believes that the risk of not purchasing the property and having it developed in a way that compromises the compliance of the LNG Facility with CSA Z276 has significant consequences for TGI and its customers. Accordingly, TGI believes it is prudent to proceed with the purchase of the Property as it is a cost effective way to mitigate this risk.

#### 4.6 Other Considerations

Two other considerations exist that, while not the principal motivation for the acquisition of the Property, represent a benefit associated with TGI purchasing the Property. First, an expanded property will facilitate siting of future LNG facilities associated with expansion and/or

replacement of existing equipment. Second, it will enhance TGI's ability to add buffer storage tanks to facilitate and support the LNG market for transportation use.

#### 4.6.1 Siting of Future LNG Facilities

As indicated previously, the Tilbury LNG Facility provides an important and valuable peaking service for the TGI gas system. A potential expansion of storage and sendout capabilities of the Tilbury LNG Facility will be considered in the future. The acquisition of the Property would significantly enhance the ability to site a second tank and other facilities associated with expansion.

As discussed in the 2008 Resource Plan (accepted by BCUC under Order G-194-08), Section 6.3.2.2 (pp. 86), there is a long term need for new market storage resources to meet the projected growth in weather sensitive demand during peak day and extended winter period throughout the Pacific Northwest Region ("region"). Utilities that currently own all or portions of existing market storage resources, and with whom TGI currently contracts for service, are expected to retain more of the capacity to meet their own needs as demand throughout the region grows. Recent investments to increase the region's storage capacity include expansions at Jackson Prairie and Mist storage facilities, and the construction of the Mt. Hayes LNG Facility on Vancouver Island. With growing demand, these recent investments will not fully satisfy the region's future need for storage resources. To address the potential long term need for market storage resources in the region, TGI may consider the development of a new LNG storage facility in the Lower Mainland.

#### 4.6.2 Buffer Storage for LNG as a Transportation Fuel

The BCUC recently approved TGI's application for Rate Schedule 16 for Interruptible LNG Sales and Dispensing Service (the "Rate Schedule 16 Application") as a five year pilot program from June 15, 2009 to December 31, 2014.<sup>3</sup> Rate Schedule 16 supports the development of LNG as a transportation fuel and advances the BC government's commitment in the 2007 Energy Plan to reduce greenhouse gas emissions in the transportation sector, and also to make more efficient use of the gas system for the benefit of all of TGI's customers by utilizing available facilities to generate additional revenue.

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<sup>3</sup> Order G-65-09, dated June 4, 2009

While the Property is not required to make the pilot program a success, TGI believes that an expanded site would enhance the ability to add buffer storage tanks to facilitate and support the LNG market for transportation use should the market develop significantly in the future. The expanded site would provide sufficient space to provide separation of the peaking gas supply service and the transportation fuel service.

#### **4.7 Justification Summary**

TGI has, over the years, worked diligently to ensure the Tilbury LNG Facility is safe and in compliance with CSA Z276. One of the ways this has been accomplished is through proactive discussions and negotiations with neighbours in an effort to control the use of the adjoining properties. In addition, TGI has undertaken numerous physical changes to the Tilbury LNG Facility to control the effects of vapour dispersion and radiant heat as set out in section 4.3. The second risk assessment study concluded that the radiant heat risk presented by the Tilbury LNG Facility is acceptable. However, any significant change in land use adjacent to the Tilbury LNG Facility will cause risk levels to change. The most cost effective way to ensure continued acceptable risk levels to persons and adjacent property, and thus facilitate continued compliance with the governing standard, is to purchase the Property to the South West of the LNG Facility and thereby control its use.

## **5 Project Execution**

The following sections discuss cost, schedule and other issues required to complete the acquisition of the property following BCUC approval.

### **5.1 Capital Cost**

TGI has made a conditional offer to purchase the Property. The Contract of Purchase and Sale will not close until all subject clauses are satisfied, and therefore the vendor has requested that the purchase price be kept confidential as it is sensitive market information.

TGI is confident that the purchase price is reasonable and reflects current market conditions. CB Richard Ellis ("CBRE") was retained to provide an independent opinion of value, which confirmed the appropriateness of the purchase price. A copy of the CBRE Report is included as Appendix 8 (Confidential). Under the Contract of Purchase and Sale all site work, including environmental remediation required for TGI's holding the Property, will be completed by the vendor.

## 5.2 Project Milestones

The key milestones associated with the Tilbury Property Purchase are listed in Table 5.2 -1 below.

**Table 5.2 - 1 Tilbury Property Purchase Key Milestones**

Milestone	Date
Letter of Intent dated	June 29, 2009
Contract of Purchase and Sale dated	September 4, 2009
Modification and Ratification Agreement dated	October 23, 2009
CPCN filed with Commission	October 28, 2009
Application for Certificate of Compliance filed	End of October 2009 (anticipated date)
Commission approves CPCN	Before or on February 20, 2010
Environmental Certificate of Compliance Issued	Anticipated before or on July 1, 2010
Contract of Purchase and Sale Closes and TGI Takes Possession	Anticipated before or on July 1, 2010

The receipt of the environmental Certificate of Compliance is subject to ongoing site remediation. TGI notes that the timelines associated with receipt of the environmental CoC and the closing of the Contract of Purchase and Sale are beyond the control of TGI, and therefore the dates in Table 5.2-1 should be interpreted as indications only, not fixed dates with a high degree of certainty. The milestone for receipt of the CoC assumes receipt after 6 months; however the Contract allows up to 2 years as indicated in Table 5.3-1.

## 5.3 Cost & Schedule Risks

Assuming approval of the CPCN in the time frame indicated in Section 1.3, there are no significant cost or schedule risks that have been identified at this time.

The following is a summary of conditions in the Contract of Purchase and Sale. If the conditions are not met within the respective times provided in the Contract of Purchase and Sale it will terminate. The conditions are as follows:

**Table 5.3 - 1 Conditions of the Contract of Purchase and Sale**

Condition	Date by Which to be Satisfied
Completion of Due Diligence by Purchaser - including as to title and the physical state of the Property and easement area	30 days after October 23, 2009 (the date of the Modification and Ratification Agreement )
Vendor Approval of the Feasibility of Remediation	120 days after August 25, 2009 (this date is referred to in the PSA as the Start Date)
Commission approval of the inclusion of the purchase into rate base on terms satisfactory to Purchaser	120 days after October 23, 2009 (the date of the Modification and Ratification Agreement )
Issuance of Certificate of Compliance	2 years after August 25, 2009 (this date is referred to in the PSA as the Start Date)

TGI is of the view that there is minimal risk of capital cost variation of any material amount in this land purchase. If any of the conditions precedent are not met or if the Certificate of Compliance is not received within the time specified, the Contract of Purchase and Sale terminates. There is no provision to renegotiate terms of the agreement or the price if any of these requirements do not occur.

#### **5.4 Environment and Socio-Economic Assessments**

All environmental contamination issues are being identified and remediated by the vendor. Issuance of a Certificate of Compliance confirming that the site meets Provincial environmental standards is a condition of sale.

A search of the Provincial Heritage Register administered by the Archaeology Branch of the Ministry of Tourism, Culture and the Arts has confirmed that there are no known archaeological or heritage sites on the Property. Because the Property has been previously disturbed and filled for use as an industrial site, it is TGI's opinion that no further archaeological investigation is required.

The Property is a disturbed industrial site that presently contributes little or no value to the overall diversity or vegetation, soils, terrain and wildlife characteristics of the area. TGI is aware



that areas of sensitive habitat exist along the foreshore fronting the property. A review of the Fraser River Estuary Management Program habitat mapping for the foreshore fronting the property indicated both areas of low productivity (green coded) and high productivity (red coded) habitat. These areas are Crown land and are not included in the Property or the easement area.

## **5.5 Stakeholder Consultation**

TGI has a long standing relationship with local stakeholders, and no issues have emerged due to the acquisition of the land. While this is a simple property purchase, TGI has discussed the purchase with a number of stakeholders including the Public Interest Advocacy Centre, the Commercial Energy Consumers Association, the Corporation of Delta, the BC Oil and Gas Commission and Canadian Pacific. No significant stakeholder concerns have emerged. The closest residences are approximately 2 kilometers away from the Property and therefore no residences will be impacted by the purchase. If TGI were to undertake projects on this property in the future, it would ensure that a full stakeholder consultation program would be implemented.

Additionally, TGI believes that no First Nations consultation is required for this purchase. The purchase of the privately owned, fee simple Property does not have the potential to impact any Aboriginal right or title. The Property and easement area (also privately owned) are within an existing industrial area, and have been previously used for heavy industry. There are no known archaeological or heritage sites on the Property.

## **6 Cost Impact to Ratepayers**

### **6.1 Treatment of Costs**

Once acquired, the Property will be incorporated into the Tilbury LNG Facility operations. As such the Property will be used to provide utility service to customers and the costs to acquire and own the property will be recovered through customer rates. This section discusses the expected cost of service impact on the Company's revenue requirement and subsequently on customers' rates. Also discussed are the opportunities that the Company has identified that have the potential to mitigate the cost impact to ratepayers. These opportunities can only be pursued once the purchase of the Property is completed and the appropriate regulatory and permitting requirements are met. Although TGI will use reasonable and prudent measures to pursue opportunities to reduce the cost impact to ratepayers, TGI believes that the acquisition of the Property is in the interests of customers regardless of the success of any mitigation measures. TGI is therefore requesting approval to recover the total costs of the Property through customer rates, as described below.

The purchase of the Property is conditional on the receipt of the environmental Certificate of Compliance within two years of the execution date of the Contract of Purchase and Sale. Since the closing date is uncertain, TGI proposes to capture all its capital costs related to the purchase of the Property in a non-rate base deferral account attracting AFUDC and to enter these costs into rate base in January 1, 2012. TGI also proposes to capture any other costs associated with owning the property in deferral accounts (as described in more detail below) and subsequently recovering those costs over a three-year amortisation period beginning in January 1, 2012. This proposed treatment whereby recovery of costs related to the purchase and ownership of the Property is deferred until January 1, 2012 also means there is no impact on approvals requested in TGI's 2010 & 2011 Revenue Requirement Application currently being reviewed by the Commission.

### **6.2 Financial Impacts**

TGI has evaluated the incremental cost of service and cash flow impacts associated with the Tilbury Property Purchase over a 25-year planning period. For the purposes of this evaluation,

the Company has assumed that: (1) The closing date for the purchase of the Property is July 1, 2010; (2) Capital costs of the Property are captured in a non-rate base deferral account attracting AFUDC until being added to rate base in the appropriate land account on January 1, 2012; (3) All non-capital costs incurred prior to January 1, 2012 (except property taxes) are captured in the same non-rate base deferral account as the land costs and; (4) property taxes incurred after the Contract closing date and prior to January 1, 2012 are captured in TGI's existing Property Tax Deferral Account<sup>4</sup>, and all subsequently recovered over a three year amortisation period. The results are summarised in the following table and show that the impact to customer rates is approximately 1.2 cents per GJ. For a typical residential customer this would equate to approximately \$1 per annum.

	2012 \$ per annum	Levelized \$ per annum	25 Year NPV
Incremental Cost of Service	\$2.1 Million	\$1.9 Million	\$24 Million
Rate Impact \$ per GJ	\$0.013	\$0.012	

Detailed financial schedules showing financial assumptions and the cost of service and cash flow impacts over a 25 year period are provided in confidential Appendix 9. As discussed in Section 1.3, Appendix 9 has been filed confidentially since it employs and displays market sensitive information, including the purchase price of the Property.

### 6.3 Potential Future Uses

Once acquired, the Property will be incorporated into the Tilbury LNG Facility operations, giving TGI greater control of the use of the property and acting as a buffer to help ensure continued compliance with mandatory safety standards. As discussed in Section 4.5, TGI's primary objective of the acquisition is to control the use of the Property in an effort to ensure the LNG Facility continues to be in compliance with the governing CSA Z276 standard. In an effort to reduce the cost impact to customers, TGI has investigated potential opportunities for other uses of the Property that will still allow the Company to maintain compliance with all required standards and ensure that overall safety and risk management objectives are met.

<sup>4</sup> Any property taxes payable by TGI on the Tilbury Property before the property enters rate base will be treated as unforecast variances in TGI's Property Tax Deferral Account. Variances captured in the Property Tax Deferral Account do not attract any carrying costs such as AFUDC or IDC.

TGI has identified two potential opportunities. The first is to subdivide the Property and sell the portion not required to meet CSA Z276. The second is to earn revenue from low impact activities on the Property, such as third party storage. Preliminary evaluation of these opportunities indicates that it could reduce the cost of service by \$200,000 to \$300,000 per annum. The evaluation of the potential benefits of these opportunities is included in confidential Appendix 9. Details of these two opportunities are provided below.

- (a) *Subdivision and Sale of a Portion of the Property:* TGI believes that the smaller portion of the Property south of Tilbury Road (a total area of 5.13 acres; see Figure 3-1 or Appendix 8 (Confidential), page 12 for Survey Plan) is not required for purposes of maintaining compliance with CSA Z276. The current owner of the Property has made clear that it is seeking to sell the entire Property and is not willing to consider a sale of the land that does not include this portion or to undertake the costs required to subdivide the Property to allow for that parcel of land to be sold separately. TGI plans to investigate the potential to subdivide off this portion of the Property and, if subdivision is possible, seek a possible sale of this parcel. TGI is proposing that any net proceeds from the sale of this parcel of land would be used to reduce rate base and therefore to reduce the overall rate impact of the Property acquisition.<sup>5</sup> For clarity, TGI is proposing this treatment for the portion of the Property that it has identified as not being required for the purposes of maintaining compliance with CSA Z276. The Company will retain the remaining portion of the land indefinitely and, at minimum, for as long as the Tilbury LNG Facility remains operational.
- (b) *Third Party Storage:* The Company plans to evaluate revenue generating opportunities, such as the potential to use the property for storage purposes<sup>6</sup>. TGI has recently obtained a market assessment from CBRE regarding the potential for renting the Property for third party storage. See Appendix 10 (Confidential). While TGI has not forecast any incremental revenue associated with the portion of the Property north of Tilbury Road, if it is able to use the land for third party storage (similar to the CP site east of the LNG Facility) or other revenue generating uses, any associated net revenues

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<sup>5</sup> TGI is proposing to accord the proceeds of the sale to customers because this section of the property will not be required or used for utility purposes. The proposal is being made without prejudice to the Company's rights under the ATCO decision in respect of any future dispositions of utility property.

<sup>6</sup> Any use of the Property will need to be consistent with Corporation of Delta zoning requirements.

would be included in the annual cost of service in those years that the revenues are realized.

#### **6.4 Summary of Financial Impacts**

Once acquired, the Property will become part of the Tilbury LNG Facility operations providing TGI with greater ongoing certainty that it will be able to continue to operate the facility in compliance with mandatory safety standards. The incremental cost of service impact is approximately \$2 million per annum, the equivalent to approximately 1.2 cents per GJ delivered.

Once the purchase of the Property is completed, TGI proposes to pursue the necessary actions to subdivide the land and sell the portion of the Property that is located south of Tilbury road. TGI will capture the subdivision and sale costs in a separate non-rate base deferral account attracting short term interest and following any sale the net proceeds will flow back to reduce the rate base associated with the Property. TGI will report to the Commission the status of the subdivision and sale of this portion of the Property at the later of the time the subdivision and sale costs and proceeds of sale are entered into rate base or January 1, 2012.

Once the purchase of the Property is complete TGI will also investigate any opportunities to earn revenue from low impact activities that could be pursued that could further mitigate the costs of holding the Property while still meeting compliance obligations. Any net revenues that may be realised from these activities would serve to reduce the annual cost of service in those years that the revenues are realized.

## 7 Conclusion

The Tilbury LNG Facility has operated safely and reliably since it was commissioned in 1971, providing significant benefits to customers. Changes in the use of the adjacent Property that result in an increase in the number of people occupying the site could jeopardize TGI's ability to maintain an acceptable risk level in the future. This could affect TGI's ability to continue to operate the Tilbury LNG Facility. There is a current opportunity to mitigate this concern by purchasing the Property, and it is in the public interest and necessity to do so.



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 Tilbury Property Purchase

**BEFORE:**

XX, 2010

**O R D E R**

**WHEREAS:**

- A. On October 28 2009, Terasen Gas Inc. ("TGI") applied (the "Application") to the British Columbia Utilities Commission (the "Commission"), pursuant to Section 45 of the Utilities Commission Act (the "Act"), for a Certificate of Public Convenience and Necessity ("CPCN") for the purchase (the "Tilbury Property Purchase") of a parcel of land known as the Northwest Hardwoods Site located at 6939, 7150 Tilbury Road, and 7505 Hopcott Road in the Tilbury Industrial Area of Delta, B.C. (the "Property") adjacent to the Tilbury LNG Facility; and
- B. TGI considers that the Tilbury Property Purchase is necessary to control development of the Property in such a manner that will not jeopardize TGI's ability to continue to comply with Canadian Standards Association standard CSA Z276, the mandatory standard governing the operation of the Tilbury LNG Facility; and
- C. TGI has entered into a Contract of Purchase and Sale (the "Contract") dated September 4, 2009 amended by the Modification and Ratification Agreement dated October 23, 2009 to acquire the Property, conditional upon (among other things) obtaining Commission approval within 120 days of October 23, 2009; and
- D. TGI states that a duty to consult with First Nations does not arise with respect to the sale of the Property, which represents the transfer of previously developed, fee simple land as between private parties;
- E. TGI states that upon the closing of the purchase transaction it will (a) pursue opportunities to subdivide the Property and sell the portion of the Property South of Tilbury Road that is not required for the purposes of compliance with CSA Z276 and (b) pursue appropriate opportunities outlined in the Application to generate revenue from the remaining Property while remaining compliant with CSA Z276, with the intention that any proceeds from these steps will be used to offset the cost of service impact associated with acquiring the Property; and
- F. The Commission determined that the Application would be reviewed by a minimal process; and
- G. The Commission Panel has considered the Application and the evidence and submissions filed in the proceeding and has determined that the Tilbury Property Purchase is in the public interest and that a CPCN should be granted to TGI for the Tilbury Property Purchase for the reasons set out in the Reasons for Decision that accompany this Order.

**NOW THEREFORE** pursuant to sections 45 and 46 of the Act, the Commission orders as follows:

1. A Certificate of Public Convenience and Necessity is granted to TGI for the Tilbury Property Purchase.



2. The purchase price and any other capital costs associated with the acquisition of the Property shall be captured in a non-rate base deferral account, with the balance attracting Allowance for Funds Used During Construction ("AFUDC") until being added to rate base in the appropriate land account on January 1, 2012.
3. The remaining incremental revenue requirement items except property taxes shall accumulate in the same non-rate base deferral account until the land is added to rate base. The balance of the of the deferral account shall be subsequently recovered in rates over a three year amortization period.
4. The property taxes incurred after the Contract closing date and prior to January 1, 2012 shall accumulate in TGI's existing Property Tax deferral account and subsequently be recovered in rates over a three year amortization period.
5. TGI is to report back to the Commission by the later of January 1, 2012 or the date the costs are recorded into rate base regarding:
  - a. the status of TGI's initiative to subdivide the Property and sell the portion of the Property South of Tilbury Road that is not required for the purposes of maintaining compliance with CSA Z276, and
  - b. potential opportunities to otherwise generate any revenue from the Property while remaining compliant with CSA Z276, and the costs TGI anticipates would be required to realize any such potential opportunities.

**DATED** at the City of Vancouver, in the Province of British Columbia, this      **XXX**      day of February 2010.

BY ORDER

*Original signed by:*

XXX

Commissioner

Attachments

Appendix 2

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**CONTRACT OF PURCHASE AND SALE**

**CONFIDENTIAL**

Appendix 3

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**CONFIDENTIAL INFORMATION MEMORANDUM**

**CONFIDENTIAL**

**Appendix 4**

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**CSA Z276 CLAUSES**

*CSA Standard*

*Z276-07*

***Liquefied natural gas (LNG) — Production,  
storage, and handling***



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Standard. Such changes or improvements can, however, provide desirable safety and operation compatible with the intent of this Standard. Such deviations may be accepted when the regulatory authority has made a special investigation of all factors and has come to the conclusion, based on sound experience and engineering judgment, that the proposed deviations meet the intent of this Standard.

## 4.2 Retroactivity

The requirements of this Standard are applicable to the operations, maintenance, and upgrading of existing installations; however, unless otherwise specified, it is not intended that existing installations be required to conform retroactively to the requirements of this Standard with regard to design and construction.

Where existing plants, equipment, buildings, structures, and installations meet the applicable design, fabrication, or construction layout provisions of the edition of this Standard in effect at the time of approval or installation, they may remain in use, provided that they do not constitute a significant risk to life or adjoining property.

For purposes of the application of retroactivity, the time of approval for a new facility will depend on the approval process of the regulatory jurisdiction responsible for the facility and shall be determined through discussions between the facility owner and the regulatory authority.

## 4.3 Adoptions

This Standard has been prepared for use in Canada, the United States, and other countries; some clauses reference Canadian and U.S. standards or publications as alternatives. Where a choice exists, the CSA requirement shall be the Canadian standard or publication.

## 4.4 Control centre

### 4.4.1

Each LNG plant, other than small facilities complying with Annex B, shall have a control centre in the locality of the plant facility from which operations and warning devices are monitored.

### 4.4.2

The control centre shall have the following capabilities and characteristics:

- (a) It shall be located apart from or be protected from other LNG facilities so that it is operational during a controllable emergency.
- (b) Each remotely actuated control system and each automatic shutdown control system required by this Standard shall be operable from the control centre.
- (c) Each control centre shall have personnel in attendance while any of the components under its control are in operation, unless the operation is being controlled by another control centre that has personnel in attendance or the facility has an automatic emergency shutdown system.
- (d) If more than one control centre is located at an LNG plant, each control centre shall have more than one means of communication with every other centre.
- (e) Each control centre shall have a means of communicating a warning of hazardous conditions to other locations within the plant that are frequented by personnel.

## 4.5 Safety and loss management system

### 4.5.1

For each LNG facility, the operating company shall develop, implement, and maintain a documented safety and loss management system that provides for the protection of people, the environment, and property.

**5.2.2.7**

The dike or impounding wall height and distance from containers operating at 103 kPa (15 psi) or less shall be determined in accordance with Figure 1.

**5.2.2.8**

Provisions shall be made to clear rain or other water from the impounding area. Automatically controlled sump pumps may be used, provided that they are equipped with an automatic cut-off device that prevents their operation when exposed to LNG temperatures. Piping, valves, and fittings whose failure can allow liquid to escape from the impounding area shall be capable of withstanding continuous exposure to LNG temperatures. If gravity drainage is used for water removal, provisions shall be made to prevent the escape of LNG by way of the drainage system.

The water removal system shall have the capacity to remove water at a minimum of 25% of the rate from a storm of a 10 year frequency and 1 hour duration, except in cases where the design of the impoundment does not allow the entrance of rainfall.

**5.2.2.9**

Insulation systems used for impounding surfaces shall be, in the installed condition, non-combustible and suitable for the intended service, taking into account the anticipated thermal and mechanical stresses and loads. If flotation is a problem, mitigating measures shall be provided.

**5.2.3 Impounding area siting****5.2.3.1 Exception**

Clauses 5.2.3.2 to 5.2.3.7 shall not apply to impounding areas serving only transfer areas at the water's edge of marine terminals.

**5.2.3.2 Thermal radiation****5.2.3.2.1**

Provisions shall be made to prevent thermal radiation flux from a fire from exceeding the limits specified in Table 1. Exclusion distances shall be calculated in accordance with the following:

- (a) the wind speed producing the maximum exclusion distances shall be used, except for wind speeds that occur less than 5% of the time based on recorded data for the area; and
- (b) the ambient temperature and relative humidity that produce the maximum exclusion distances shall be used, except for values that occur less than 5% of the time based on recorded data for the area.

**5.2.3.2.2**

Thermal radiation distances shall be calculated in accordance with one of the following:

- (a) the model described in GTI GRI-89/0176, which is also available as the "LNGFIRE3" computer model produced by GRI (Gas Research Institute), or alternative models that take into account the same physical factors as the GRI model and that have been validated by experimental test data; exclusion distances are calculated using
  - (i) the wind speed producing the maximum exclusion distances, except for wind speeds that occur less than 5% of the time based on recorded data for the area; and
  - (ii) the ambient temperature and relative humidity that produce the maximum exclusion distances, except for values that occur less than 5% of the time based on recorded data for the area;
- (b) models that
  - (i) take into account impoundment configuration, wind speed and direction, humidity, and atmospheric temperature; and
  - (ii) have been validated by experimental test data appropriate for the size and conditions of the hazard to be evaluated; or



- (c) the following formula, provided that the ratio of the major to minor dimensions of the impoundment does not exceed 2:

$$d = F\sqrt{A}$$

where

- $d$  = distance from the edge of impounded LNG, m (ft)  
 $F$  = flux correlation factor  
 = 3.0 for 5000 W/m<sup>2</sup> (1600 Btu/h/ft<sup>2</sup>)  
 = 2.0 for 9000 W/m<sup>2</sup> (3000 Btu/h/ft<sup>2</sup>)  
 = 0.8 for 30 000 W/m<sup>2</sup> (10 000 Btu/h/ft<sup>2</sup>)  
 $A$  = surface area of impounded LNG, m<sup>2</sup> (ft<sup>2</sup>)

### 5.2.3.3 Dispersion

The spacing of an LNG tank impoundment area relative to a property line that can be built upon shall be such that, in the event of a design spill as defined in Clause 5.2.3.4, an average concentration of methane in air of 50% of the lower flammability limit (LFL) does not extend beyond the property line that can be built upon at an elevation above grade. Flammable mixture dispersion distances shall be determined in accordance with the following:

- (a) Distances shall be computed in accordance with a vapour dispersion model that takes into account physical factors influencing LNG vapour dispersion, including gravity spreading, heat transfer, humidity, wind speed, atmospheric stability, buoyancy, and surface roughness.
- (b) The vapour dispersion model shall also be validated by experimental test data appropriate for the size and conditions of the hazard to be evaluated. The method used shall be based upon the actual liquid characteristics and the maximum vapour outflow rate from the vapour containment volume (the vapour generation rate plus the displacement due to liquid inflow).
- (c) The effects of hazard mitigation designs and methods such as dikes, impounding surface insulation, or water curtains may be taken into account.

**Note:** A vapour dispersion model that meets the provisions of Items (a) and (b) is available as a public domain model and is described in GTI GRI-89/0242. This reference does not exclude other models.

### 5.2.3.4 Design spill

The design spill for impounding areas shall be determined as specified in Table 2.

### 5.2.3.5 Damage to marine carriers

LNG container impounding areas shall be located so that the heat flux from a fire over the impounding area does not cause major structural damage to any LNG marine carrier that could prevent its movement.

### 5.2.3.6 Small containers

Containers with an aggregate storage of 265 m<sup>3</sup> (70 000 US gal) or less on one site may be installed in accordance with Table 3, provided that the containers are equipped as follows:

- (a) All connections shall be equipped with automatic fail-safe valves. These automatic valves shall be designed to close under any of the following conditions:
  - (i) fire detection;
  - (ii) excess flow of LNG from the container, as measured by loss of line pressure or other means;
  - (iii) gas detection; and
  - (iv) manual operation from a local and remote location.
- (b) Appurtenances shall be installed as close to the container as practicable to ensure that a break resulting from external strain occurs on the piping side of the appurtenance while maintaining intact the valve and piping on the container side of the appurtenance. The type, quantity, and location of the detection devices shall be in accordance with the requirements of Clause 10.

Relief valves and instrument connection valves shall be exempt from the requirements of Items (a) and (b). Connections used only for flow into the container may be equipped with two backflow check valves in lieu of the requirements of Items (a) and (b).

### 7.1.2.5

Any portion of the outer surface area of an LNG container that can be accidentally exposed to low temperatures resulting from the leakage of LNG or cold vapour from flanges, valves, seals, or other non-welded connections shall be designed to withstand such temperatures or otherwise protected from the effects of such exposure.

### 7.1.2.6

Where two or more containers are situated in a common dike, the container foundations shall be capable of withstanding contact with LNG or shall be protected against contact with an accumulation of LNG that could endanger their structural integrity.

### 7.1.2.7

The density of the liquid shall be assumed to be the actual mass per unit volume at the minimum storage temperature; however, in no case shall the assumed density be less than  $470 \text{ kg/m}^3$  ( $29.3 \text{ lb/ft}^3$ ).

### 7.1.2.8

Provisions shall be made for removal of the container from service.

## 7.1.3 Seismic design

### 7.1.3.1

Seismic loads shall be considered in the design of the LNG container and its impounding system. For all installations except those provided for in Clause 7.1.3.8, investigations shall be performed to determine the characteristics of seismic ground motion at the site. The two levels of seismic ground motion used in the design of the LNG facilities shall be the operating basis earthquake (OBE) and the safe shutdown earthquake (SSE), defined as follows:

- (a) The OBE shall be representative of seismic ground motion that has a probability of exceedance not greater than 0.2% per annum (10% in 50 years, mean recurrence interval of 475 years).
- (b) The SSE shall be representative of seismic ground motion that has a probability of exceedance not greater than 0.04% per annum (2% in 50 years, mean recurrence interval of 2475 years).

**Note:** See Annex A for additional seismic information.

### 7.1.3.2

The site-specific investigation to develop the OBE and SSE shall include all of the following:

- (a) It shall take into account the regional seismicity and geology, the expected recurrence rates and maximum magnitudes of events on known faults and source zones, the location of the site with respect to these near-source effects, if any, and the characteristics of subsurface conditions.
- (b) The vertical and horizontal acceleration response spectra for both OBE and SSE shall be constructed covering the entire range of anticipated damping factors and natural periods of vibration, including the fundamental period and damping ratio for the sloshing (convective) mode of vibration of the contained LNG.
- (c) If information is not available to develop a vertical response spectrum, the ordinates of the vertical response spectrum shall not be less than two-thirds of those of the horizontal spectrum; if information is available, the corresponding ratio shall not be less than half.

### 7.1.3.3

The two levels of ground motion defined in Clause 7.1.3.1 and determined according to Clause 7.1.3.2 shall be used for the earthquake-resistant design of the following structures and systems:

- (a) an LNG container and its impounding system;
- (b) system components required to isolate the LNG container and maintain it in a safe shutdown condition; and
- (c) structures or systems, including fire-protection systems, the failure of which can affect the integrity of item (a) or (b).

**7.1.3.4**

The structures and systems identified in Items (a) to (c) of Clause 7.1.3.3 shall be designed to remain operable during and after the OBE. The OBE design shall be based on an elastic response spectrum that is not reduced by a ductility or overstrength factor. The OBE seismic force may be divided by 1.4 when allowable stresses are used in accordance with the applicable code or standard. The design shall provide for no loss of containment capability of the primary container, and it shall be possible to isolate and maintain the LNG container during and after the SSE. Appropriate ductility or overstrength factors may be considered in the SSE design.

**7.1.3.5**

The impounding system shall, as a minimum, be designed to withstand an SSE while empty and an OBE while holding the volume,  $V$ , specified in Clause 5.2.2.1. After an OBE or SSE, there shall be no loss of containment capability.

**7.1.3.6**

An LNG container shall be designed for the OBE, and a stress-limit check shall be made for the SSE, to ensure compliance with Clause 7.1.3.4. OBE and SSE analyses shall include the effect of liquid pressure on buckling stability. Stresses for the OBE shall be in accordance with the code or standard referenced in Clause 7.2, 7.3, or 9.1, as applicable. Stresses for the SSE shall be subjected to the following limits:

- (a) In metal containers, stresses shall be allowed to reach the specified minimum yield for the tensile conditions and critical buckling for the compression condition.
- (b) In prestressed concrete containers, axial-hoop stresses from unfactored loads shall not exceed the modulus of rupture for the tensile condition and 69% of the specified 28 d compressive strength for the compressive condition. Extreme fibre stresses from combined axial- and bending-hoop forces from unfactored loads shall not exceed the modulus of rupture for the tensile condition and 69% of the specified 28 d compressive strength for the compressive condition. Hoop-tensile stresses shall not exceed the yield stress in non-prestressed reinforcement and 94% of the yield stress in prestressed reinforcement with the assumption of a cracked section.

If an SSE event occurs, the tank shall be evaluated and inspected in accordance with Clause 13.4.6.2(h).

**7.1.3.7**

The design of the LNG container and associated structural components shall incorporate a dynamic analysis that includes the effects of sloshing and restrained liquid. Container flexibility, including shear deformation, shall be included in the determination of the container response. For a container not founded on bedrock, soil/structure interaction shall be included. Where the container is supported by pile caps, the flexibility of the pile system shall be considered in the analysis.

**7.1.3.8**

Shop-built LNG containers and their support systems shall be designed for the seismic ground motion specified in Paragraph 4.1.8.17 of the *National Building Code of Canada*. Sentence (2) of Paragraph 4.1.8.17 shall not apply, and seismic design shall always be performed. For self-supported containers supported at grade, the ratio  $h_x/h_n$  may be taken as zero. The vertical acceleration shall be taken as  $\pm 0.2F_a S_a(0.2)W_p$  and shall be applied simultaneously with the horizontal acceleration.  $W_p$  shall be the operating weight of the container plus its maximum contents during operation. The container and its supports shall be designed for the resultant seismic forces in combination with the operating loads, using the allowable stresses increase shown in the code or standard used to design the container or its supports.

The requirements of Clauses 7.1.3.1 to 7.1.3.9 shall apply to installations of ASME containers or the reinstallations of ASME containers originally installed under a previous edition of the Standard.

**7.1.3.9**

Instrumentation capable of measuring the ground motion to which containers can be subjected shall be provided at the site.

**Table 1**  
**Thermal radiation flux limits to property lines and occupancies**  
 (See Clause 5.2.3.2.1.)

Thermal radiation flux		
W/m <sup>2</sup>	Btu/h/ft <sup>2</sup>	Exposure
5 000	1 600	At a property line that can be built upon, for ignition of a design spill (as specified in Clause 5.2.3.4)
5 000	1 600	At the nearest point located outside the owner's property line that, at the time of plant siting, is used for outdoor assembly by groups of 50 or more persons, for a fire over an impounding area containing a volume, $V$ , of LNG determined in accordance with Clause 5.2.2.1
9 000	3 000	At the nearest point of the building or structure outside the owner's property line that is in existence at the time of plant siting and is used for occupancies classified by NFPA 101 as assembly, educational, health care, detention and correction, or residential, for a fire over an impounding area containing a volume, $V$ , of LNG determined in accordance with Clause 5.2.2.1
30 000	10 000	At a property line that can be built upon, for a fire over an impounding area containing a volume, $V$ , of LNG determined in accordance with Clause 5.2.2.1

**Appendix 5**

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**ERCO RISK ANALYSIS REPORT**

**CONFIDENTIAL**

**Appendix 6**

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**ACRES RISK ASSESSMENT REPORT**

**CONFIDENTIAL**

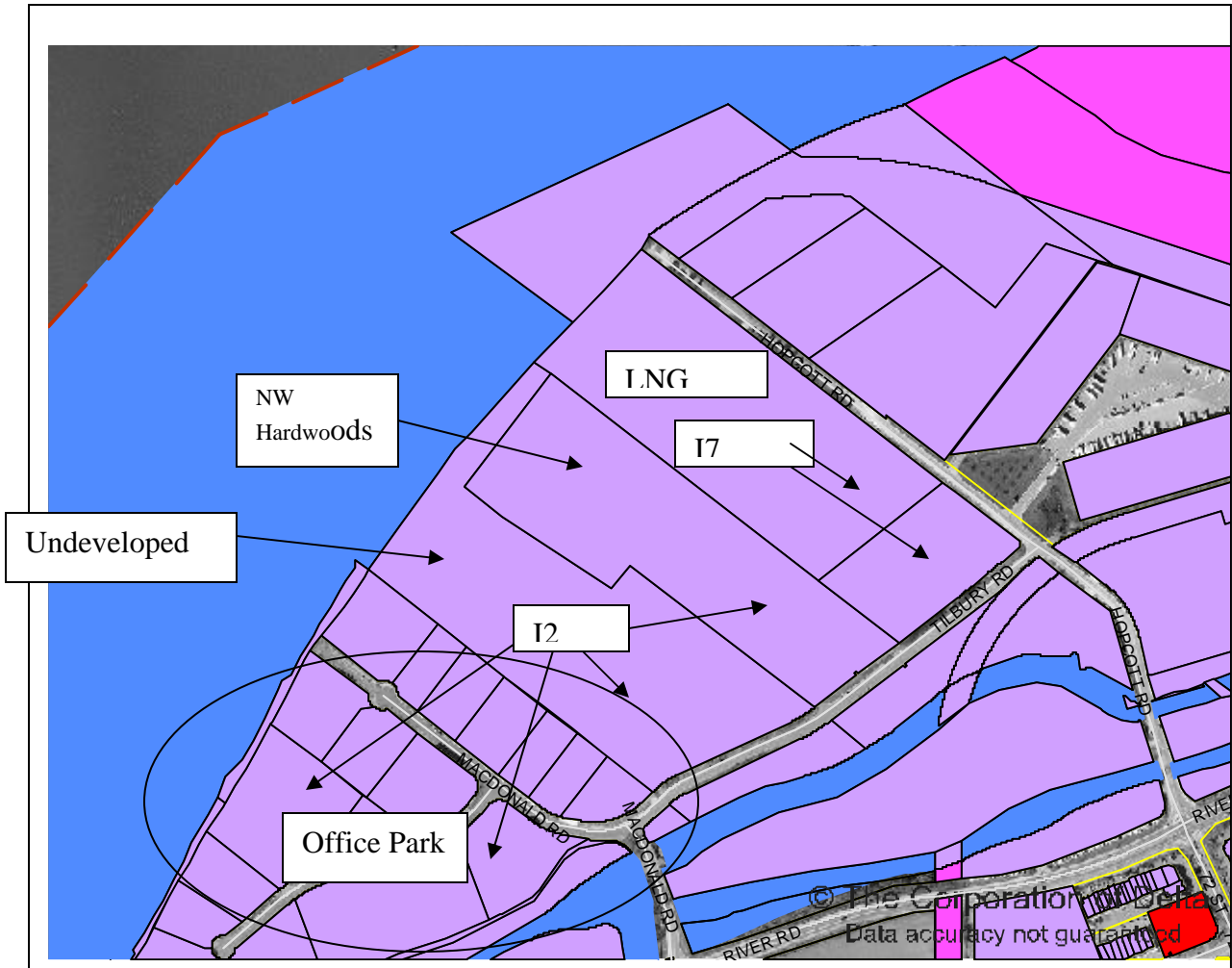
**Appendix 7**

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**ZONING SPECIFICATIONS**







Amend.  
BL 3670, 1983

**I1 ZONE: LIGHT INDUSTRIAL**

811 **Permitted Uses:**

Subject to the regulations of Part IV, Sections 800 and 814, the following uses and no other uses shall be permitted in the I1 Zone:

The following Commercial Uses and Services:

Automotive equipment repair and body shops

Sale, repair and rental of:

Machinery and heavy equipment

Trailers, mobile homes, recreation vehicles and pleasure boats

Tools, small engines and allied products

Household appliances

"Office Operation", including financial institutions

Eating and drinking establishments, excluding pubs, beer parlours and drive-in restaurants

"Printing, Publishing and Allied Industries"

Smoke shops and grocery stores to a maximum 'Floor Area' of 140 square metres

Scientific, research and testing laboratories, excluding nuclear reactors

Cold storage and frozen food lockers, including manufacture of ice

Laundry and dry cleaning establishments

"Auction Rooms"

Trade schools

"Recording Studios"

Moving, delivering and storage establishments, excluding the storage of 'household hazardous waste', 'special waste', 'bio-medical waste', 'solid waste', 'semi solid-waste' and 'radioactive waste'.

Taxi dispatch office and parking and maintenance of taxis

Warehousing, wholesaling and distribution, including incidental retail sales, provided the retail sales area is not more than 20% of the principal use area

Welding and machine shops

Veterinarian services, excluding open runs and pens

Tire sales and re-treading

Amend.  
BL 5412, 1996  
Amend.  
BL 5740, 2000  
Amend.  
BL 5740, 2000

Amend.  
BL 5633, 1998

“Beverage Container Recycling and Collection Depot” subject to Section 703

The manufacturing, compounding, packaging or sorting of cosmetics, drugs, perfumes, pharmaceuticals, soaps or toiletries, excluding all processes involving the refining or rendering of fats or oils.

The manufacturing, processing or dyeing of clothing and textile products, excluding leather tanning and manufacture of synthetic fibres.

The processing, packaging or storage of confectionery, food products and beverages and processing of pre-dressed and Government inspected meats and eviscerated poultry but excluding those involving the distillation, fermentation or rendering of fats or oils, or the slaughtering of fish.

Storage and sale of:

Agricultural and horticultural products and supplies

Furniture and fixtures

Building and construction supplies, including floor coverings

Camping and sporting goods

Fuel, including firewood and key lock dispensing but excluding service stations

The manufacturing, finishing or packaging of the following miscellaneous products or others of like character or kind:

Articles from prepared paper, glass and ceramic materials

Articles from prepared bone, cork, feather, fibre, hair, horn and wax

Business and office equipment and supplies

Luggage, sporting goods and camping supplies

Jewelry

Watches, timing devices and meters

Musical instruments

Novelties and toys

Optical and photographic equipment

Medical, dental and surgical equipment

Scientific and professional instruments and equipment

Advertising signs and displays

Electronic, electrical and mechanical equipment

Automotive parts and accessories

Metal ornamental and art products

Household and office furniture and fixtures' products

Plumbing, heating, air conditioning and sheet metal

		Bicycles										
		Household appliances										
		Screens, storm doors and windows										
Amend BL 5685, 1998		Wooden fences only from pre-cut lumber, solely within an enclosed building, but excluding the milling of lumber										
		'Special Trade Contractors'										
Amend. BL 6555, 2007		'Farming'.										
Amend. BL 6555, 2007		<u>Permitted Accessory Uses:</u>										
		Any building, structure or use customarily accessory to a "Permitted Use" other than 'Farming' shall be permitted. Where the 'Lot' is used for 'Farming', Section 813 shall apply.										
		A residence of a Watchman who is essential to the operation of a "Permitted Use" other than 'Farming' shall be permitted.										
		Food services, sleeping accommodation and recreation facilities primarily intended for the use of employees shall be permitted, except as accessory to 'Farming'.										
		Retail sale of goods lawfully manufactured or stored on the property, other than drugs listed in Schedules I, IA, II, III and IV of the Drug Schedules Regulation under the <i>Pharmacists, Pharmacy Operations and Drug Scheduling Act</i> , shall be permitted provided such retail sales use is located in the same building as a "Permitted Use" and provided the 'Floor Area' of the retail sales use does not exceed 10% of the gross 'Floor Area' of such building. For 'Farm Retail Sales', Section 813 shall apply instead.										
Amend. BL 4395, 1990	812	<u>Setback and Maximum 'Height' Regulations:</u>										
Amend. BL 6367, 2006		<table><tr><td><u>Minimum Setback:</u></td><td>Principal and Accessory Uses <b>Except</b> 'Farming', 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities'.</td></tr><tr><td>Front</td><td>7.5 metres</td></tr><tr><td>Rear</td><td>1.50 metres see (3)*</td></tr><tr><td>Side</td><td>see (4)*</td></tr><tr><td>Side on a Flanking Street</td><td>4.5 metres see (1)* and (2)*</td></tr></table>	<u>Minimum Setback:</u>	Principal and Accessory Uses <b>Except</b> 'Farming', 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities'.	Front	7.5 metres	Rear	1.50 metres see (3)*	Side	see (4)*	Side on a Flanking Street	4.5 metres see (1)* and (2)*
<u>Minimum Setback:</u>	Principal and Accessory Uses <b>Except</b> 'Farming', 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities'.											
Front	7.5 metres											
Rear	1.50 metres see (3)*											
Side	see (4)*											
Side on a Flanking Street	4.5 metres see (1)* and (2)*											
Amend. BL 6367, 2006		Setbacks for 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities' shall be no closer in horizontal distance to the front 'Lot' line or a 'Lot' line adjacent to a 'Flanking Street' or other 'Lot' lines shown below than the distance specified below. Section 305 does not apply for 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities' in this Zone.										

The following 'Lot' line and Flanking Street setbacks apply to dedicated and constructed frontage roads and abutting roads, lanes or Highways.

	'Front Lot Line' and a 'Lot' Line adjacent to 'Flanking Street'	Other 'Lot' Lines
<ul style="list-style-type: none"> <li>• 'Farm House'</li> <li>• 'Additional Farm House'</li> <li>• 'Accessory Farm Residential Facilities' except for decorative landscaping</li> </ul>	6 metres	15 metres

Maximum 'Height': 10 metres see (5)\*

- 1)\* All buildings and structures adjoining any Single Family Residential Zone, Multiple Family Residential Zone or Personal Care Zone shall have a front setback of 7.5 metres and rear and side setbacks equal to the 'height' of the building or structure, but not less than 7.5 metres.
- 2)\* All buildings and structures on 'Lots' abutting River Road shall have a setback equal to the 'height' of the building or structure, but not less than 7.5 metres from River Road.
- 3)\* All buildings and structures backing an adjoining side yard shall have a rear yard setback of not less than 3.5 metres.
- 4)\* Where no access by a Highway to the rear of the 'Lot' exists, one minimum 7.5 metre side setback will be required. In the case where a paved roadway at least 9.0 metres wide provides vehicular access to the rear of the 'Lot', no minimum side setback shall be required.
- 5)\* The maximum 'height' for all "Permitted Uses" except 'Farming' may be increased to a maximum of 15 metres by increasing the front yard setback by the distance equal to the 'height' beyond 10 metres, except in the event that the use and structure on the 'Lot' is adjacent to any other zone where such a use is prohibited, the 'height' of all structures shall not exceed the maximum 'height' permitted on the adjacent property.
- 6) The maximum 'height' of a 'Farm House', 'Additional Farm House' or 'Accessory Farm Residential Facilities' shall be as per Section 813.

Amend.  
BL 4395, 1990

Amend.  
BL 6555, 2007

Amend.  
BL 6555, 2007

Amend.  
BL 6555, 2007

813 Farming:

1. Where the 'Lot' is used for 'Farming', any permitted accessory uses provided for that use in Section 501 are permitted as accessory uses in this zone, subject to the terms and conditions of the A1 Agriculture Zone.
2. Where the 'Lot' is used for 'Farming', or any permitted accessory use related thereto, Sections 502 to 517 apply to such uses.

	814	<u>Other Regulations:</u>
		<u>Off-Street Loading:</u>
Amend. BL 4691, 1990		Off-street loading spaces shall be required as per Part IV, Sections 409 and 411, as per Part IX, Section 902.
		<u>Off-Street Parking:</u>
		Off-street parking spaces shall be required as per Part IX.
Amend. BL 4691, 1990		<u>Landscaping:</u>
		Landscaping shall be required as per Section 805.
Amend. BL 5740, 2000	815	<u>Land Development:</u> <b>(deleted by BL 5740, 2000)</b>
	816	<u>'Farm Home Plate':</u> <b>(deleted by BL 6555, 2007)</b>
	817	<u>Area of a 'Farm House' or 'Additional Farm House':</u> <b>(deleted by BL 6555, 2007)</b>
	818	<u>'Additional Farm House':</u> <b>(deleted by BL 6555, 2007)</b>

Amend.  
BL 3670, 1983

## **I2 ZONE: HEAVY INDUSTRIAL**

821

### **Permitted Uses:**

Subject to the regulations of Part IV, Sections 800 and 824, the following uses and no other uses shall be permitted in the I2 Zone

All uses permitted in the I1 – Light Industrial Zone

Amend.  
BL 3914, 1985  
BL 5148, 1994

'Manufacturing and Processing Industries', excluding oil and natural gas processing, radioactive materials, cement, asphalt, tar and leather tanning

Kennels

Log Storage

Ship yards

Fish processing

Slaughtering of animals

Construction industries

'Transportation, Communication and Other Utilities', excluding service station

Processing of natural agricultural products

Auto-towing and storage facilities, excluding dismantling, salvage of parts and sale thereof

Manufacture, sale and rental of modular and pre-fabricated structures for living accommodation, storage, offices, etc

Drive-in theatre

Golf course

Sale and service of heavy machinery and equipment

Lease or rental of trucks

Amend.  
BL 5455, 1996

Recycling of 'Solid Waste', excluding all forms of organic composting and recycling

Amend.  
BL 5871, 2001

### **Permitted Accessory Uses:**

Amend.  
BL 6555, 2007

Accessory Manufacturing and Processing Uses

Any building, structure or use customarily accessory to a "Permitted Use"; except for 'Farming' or 'Kennel'; shall be permitted, subject to the setback requirements under Section 822

A residence of a Watchman who is essential to the operation of a "Permitted Use"; except for 'Farming' or 'Kennel'; shall be permitted

Food services, sleeping accommodation and recreation facilities primarily intended for the use of employees shall be permitted except as accessory to 'Farming' or 'Kennel'

Retail sale of goods lawfully manufactured or stored on the property, other than drugs listed in Schedules I, IA, II, III and IV of the Drug Schedules Regulation under the *Pharmacists, Pharmacy Operations and Drug Scheduling Act* shall be permitted provided such retail sales use is located in the same building as a "Permitted Use" and provided the 'Floor Area' of the retail sales use does not exceed 20 percent of the gross 'Floor Area' of such building. For 'Farm Retail Sales' Section 823 shall apply

822

Setback and Maximum 'Height' Regulations:

Amend.  
BL 4395, 1990  
Amend.  
BL 4665, 1990  
Amend.  
BL 6367, 2006  
Amend.  
BL 6555, 2007

<u>Minimum Setback</u>	Principal and Accessory Uses <u>Except</u> 'Farming', 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities'
Front	7.5 metres
Rear	1.50 metres see (3)*
Side	see (4)*
Side on a Flanking Street	4.5 metres see (1)* and (2)*

Setbacks for 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities' shall be no closer in horizontal distance to the front 'Lot' line or a 'Lot' line adjacent to a 'Flanking Street' or other 'Lot' lines shown below, than the distance specified below. Section 305 does not apply for 'Farm House', 'Additional Farm House' and 'Accessory Farm Residential Facilities' in this Zone.

The following 'Lot' line and 'Flanking Street' setbacks apply to dedicated and constructed frontage roads and abutting roads, lanes or Highways.

	'Front Lot Line' and a 'Lot' Line Adjacent to a 'Flanking Street'	Other 'Lot' Lines
<ul style="list-style-type: none"> <li>'Farm House'</li> <li>'Additional Farm House'</li> <li>'Accessory Farm Residential Facilities' except for decorative landscaping</li> </ul>	6 metres	15 metres

- 1)\* All buildings and structures adjoining any Single Family Residential Zone, Multiple Family Residential Zone or Personal Care Zone shall have a 'Front Setback' of 7.5 metres and 'Rear' and side setbacks equal to the 'height' of the building or structure, but not less than 7.5 metres.
- 2)\* All buildings and structures on 'Lots' abutting River Road shall have a setback equal to the 'height' of the building or structure, but not less than 7.5 meters from River Road.



- 3)\* All buildings and structures backing an adjoining side yard shall have a rear yard setback of not less than 3.5 metres.
- 4)\* Where no access by a Highway to the rear of the 'Lot' exists, one minimum 7.5 metre side setback will be required. In the case where a paved roadway at least 9.0 metres wide provides vehicular access to the rear of the 'Lot', no minimum side setback shall be required.

Maximum 'Height':

No maximum 'height' for buildings and structures except for those used for 'Farming' or 'Kennels' or permitted accessory uses thereto, in which case Section 823 shall apply.

Amend.  
BL 6555, 2007

823

Farming:

1. Where the 'Lot' is used for 'Farming' or 'Kennel', any permitted accessory uses provided for those uses in Section 501 are permitted as accessory uses in this Zone, subject to the same terms and conditions.

Amend.  
BL 6555, 2007

2. Where the 'Lot' is used for 'Farming', 'Kennel', or any permitted accessory use related thereto, Sections 502 to 517 apply to such uses.

824

Other Regulations:

1. Screens for Drive-in Theatres:

Screens for Drive-in Theatres shall be located and constructed so that the picture shown thereon is not visible from any Highway.

2. Access to Drive-in Theatres:

Space for vehicles waiting for entrance to Drive-in Theatres shall be provided so that 30 percent of the vehicular capacity of the Theatre can be accommodated off the travelled portion of the Highway.

3. Street Loading:

Off-street loading spaces shall be required as per Part IV, Sections 409 and 411, as per Part IX, Section 902.

4. Off-Street Parking:

Off-street parking spaces shall be required as per Part IX.

5. Landscaping:

Landscaping shall be required as per Section 805.

6. Outside Storage/Loading-Unloading:

- a) any recycling is to be carried out within a totally enclosed building; and
- b) no 'Solid Waste' may be stored or located outside of a totally enclosed building.

Amend.  
BL 4691, 1990

Amend.  
BL 4691, 1990

Amend.  
BL 5871, 2001

Amend.  
BL 5740, 2000

- 825 Land Development: **(deleted by BL 5740, 2000)**
- 826 'Farm Home Plate': **(deleted by BL 6555, 2007)**
- 827 Area of a 'Farm House' or 'Additional Farm House': **(deleted by BL 6555, 2007)**
- 828 'Additional Farm House': **(deleted by BL 6555, 2007)**

**Appendix 8**

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**CBRE - BROKER OPINION OF VALUE**

**CONFIDENTIAL**

**Appendix 9**

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**FINANCIAL SCHEDULES AND SUMMARY**

**CONFIDENTIAL**

Appendix 10

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**CBRE - LEASING OPPORTUNITIES FOR TILBURY LANDS**

**CONFIDENTIAL**

Appendix 11

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**CONFIDENTIAL ADDENDUM TO THE APPLICATION**

**CONFIDENTIAL**