

SIXTH FLOOR, 900 HOWE STREET, BOX 250
VANCOUVER, B.C. V6Z 2N3 CANADA
web site: <http://www.bcuc.com>



**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER** G-44-05

TELEPHONE: (604) 660-4700
BC TOLL FREE: 1-800-663-1385
FACSIMILE: (604) 660-1102

**IN THE MATTER OF
the Utilities Commission Act, R.S.B.C. 1996, Chapter 473**

and

**An Application by Terasen Gas (Vancouver Island) Inc.
for Approval of a Liquefied Natural Gas Storage and Delivery Agreement**

BEFORE: L.A. Boychuk, Commissioner
N.F. Nicholls, Commissioner May 18, 2005
P.E. Vivian, Commissioner

O R D E R

WHEREAS:

- A. In its Decision dated February 15, 2005 and Order No. C-2-05 regarding the Terasen Gas (Vancouver Island) Inc. ("TGVI") 2004 Resource Plan filing and Certificate of Public Convenience and Necessity ("CPCN") application for a liquefied natural gas ("LNG") storage project at Mount Hayes near Ladysmith on Vancouver Island (the "Decision"), the British Columbia Utilities Commission (the "Commission") granted conditional approval to TGVI for a CPCN for the LNG storage project; and
- B. One condition of the CPCN approval was that an LNG storage agreement assuring TGVI of LNG mitigation revenue consistent with the amount of such revenue that TGVI used in its financial analysis of the LNG project will be executed by TGVI and Terasen Gas Inc. ("Terasen Gas") and approved by the Commission, prior to the commencement of construction of the LNG project; and
- C. In the Decision, the Commission also identified several matters for TGVI to address in a reworked LNG storage agreement; and
- D. On March 31, 2005, TGVI submitted a Liquefied Natural Gas Storage and Delivery Agreement with Terasen Gas dated March 31, 2005 (the "LNG Storage Agreement"), and requested Commission approval of the LNG Storage Agreement pursuant to Section 61 of the Utilities Commission Act (the "Act"); and
- E. Also on March 31, 2005, Terasen Gas submitted the LNG Storage Agreement for Commission approval pursuant to Section 71 of the Utilities Commission Act ("the Act"); and
- F. TGVI and Terasen Gas provided copies of the two applications to Intervenor in the Commission hearing on the TGVI 2004 Resource Plan and CPCN application for the LNG storage project; and
- G. TGVI and Terasen Gas requested that the two applications be reviewed concurrently, and requested approval of the LNG Storage Agreement by April 15, 2005 in order to meet anticipated construction deadlines for the LNG project; and

**BRITISH COLUMBIA
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2

- H. Commission Letter No. L-29-05 invited written comments from Intervenor in the Commission hearing on the TGVI 2004 Resource Plan and CPCN application for the LNG storage project; and
- I. On April 14, 2005, TGVI and Terasen Gas filed several amendments to the LNG Storage Agreement; and
- J. On April 18, 2005, Avista Energy, Inc., British Columbia Hydro and Power Authority and the BC Old Age Pensioners' Organization et al. ("BCOAPO") filed written comments on the LNG Storage Agreement; and
- K. On April 20, 2005, TGVI and Terasen Gas responded to the comments regarding the LNG Storage Agreement and proposed several additional amendments to the agreement; and
- L. The Commission has considered the applications and the written submissions it has received, and concludes that the LNG Storage Agreement satisfactorily addresses the matters identified in the Decision and should be approved for TGVI pursuant to Section 61 of the Act, for the reasons set out in the Reasons for Decision attached as Appendix A to this Order.

NOW THEREFORE the Commission orders as follows:

1. Pursuant to Section 61 of the Act, the Commission approves for TGVI the LNG Storage Agreement, as amended by the April 14, 2005 and April 20, 2005 letters from TGVI and Terasen Gas.
2. The Commission approves the annual Capacity Demand Rate of \$1.44 per gigajoule of Storage Capacity, the annual Vapourization Demand Rate of \$57.60 for each gigajoule per day of Firm Vapourization Rate and the Liquefaction Commodity Charge of \$0.75 per gigajoule, as set out in Schedule A that accompanied the LNG Storage Agreement.
3. The Commission will accept, subject to timely filing, the amended LNG Storage Agreement including Schedule A, in standard Tariff Supplement format.

DATED at the City of Vancouver, in the Province of British Columbia, this 27th day of May 2005.

BY ORDER

Original signed by:

Lori Ann Boychuk
Commissioner

Attachment

TERASON GAS (VANCOUVER ISLAND) INC.
Application for Approval of a Liquefied Natural Gas Storage and Delivery Agreement

REASONS FOR DECISION

1.0 INTRODUCTION

In its February 15, 2005 Decision and Order No. C-2-05 regarding the Terasen Gas (Vancouver Island) Inc. (“TGVI”) 2004 Resource Plan filing and Certificate of Public Convenience and Necessity (“CPCN”) application for a liquefied natural gas (“LNG”) storage project (the “Decision”), the Commission granted conditional approval for a CPCN for the LNG storage project on Vancouver Island at Mount Hayes near Ladysmith. One of the conditions was stated as follows:

“An LNG Storage Agreement that assures TGVI of LNG mitigation revenue consistent with the amount of such revenue that TGVI used in its financial analysis will be executed by TGVI and Terasen Gas Inc. and approved by the Commission, prior to commencement of construction of the LNG Project.”

Based on the discussion in the hearing, in the Decision at pages 82 and 83, the Commission also identified the following matters for TGVI to address in a reworked LNG storage agreement that it would file for Commission approval:

- “Further to statements in the TGVI Argument, in order to provide assurance that the LNG Mitigation Revenue assumed by TGVI in its financial analysis will be realized, Terasen Gas should have the right and obligation to contact for all LNG storage capacity that TGVI determines is excess to the needs of TGVI and its customers (TGVI Argument, p. 38);
- It would significantly reduce the value of the arrangement to TGVI if there is risk that commitments to Terasen Gas could reduce the flexibility of TGVI’s use of the LNG facility and perhaps require TGVI to construct system expansions that would not otherwise be necessary. While Terasen Gas should have reasonable notice of TGVI’s requirements, a long-term schedule of surplus LNG capacity appears unnecessarily constraining;
- TGVI should review the effect that the LNG Storage Agreement may have on other transportation shippers on its system, particularly interruptible shippers; and
- In its Argument, TGVI refers to its testimony that the charges under the agreement are market-based charges (TGVI Argument, p. 40). However, as discussed in Chapter 10, the estimated value for surplus LNG capacity was based on charges for Mist underground gas storage, which has somewhat different characteristics than LNG storage. Also, it seems unlikely that TGVI will offer surplus LNG capacity to other potential customers. When TGVI files the reworked agreement, it should provide justification of the proposed rates, and address whether the rates should be revisited periodically.”

2.0 APPLICATION AND REVIEW PROCESS

On March 31, 2005 TGVI filed for Commission approval, pursuant to Section 61 of the Utilities Commission Act (the “Act”), a Liquefied Natural Gas Storage and Delivery Agreement with Terasen Gas Inc. (“Terasen Gas”) dated March 31, 2005 (the “LNG Storage Agreement”). Terasen Gas also requested Commission approval of the LNG Storage Agreement pursuant to Section 71 of the Act. On April 14, 2005 TGVI and Terasen Gas filed several amendments to the LNG Storage Agreement.

Commission Letter No. L-29-05 dated April 11, 2005 to TGVI, Terasen Gas and Intervenors in the proceeding for the TGVI 2005 Resource Plan and CPCN application for the LNG storage project, invited written comments on the applications for approval of the LNG Storage Agreement.

Avista Energy, Inc. (“Avista”), British Columbia Hydro and Power Authority (“BC Hydro”) and the BC Old Age Pensioners’ Organization et al. (“BCOAPO”) filed comments on the LNG Storage Agreement. On April 20, 2005, TGVI and Terasen Gas replied to the comments and proposed several additional amendments to the LNG Storage Agreement.

3.0 TERMS OF THE LNG STORAGE AGREEMENT

This section will review, at a summary level, the terms of the LNG Storage Agreement in relation to the matters that the Commission raised in the Decision and that interested parties raised in their written comments.

Terms of the LNG Storage Agreement as drafted

BCOAPO and BC Hydro identified several apparent omissions and inconsistencies in the terms of the LNG Storage Agreement, as drafted. In their April 20, 2005 reply, TGVI and Terasen Gas proposed several additional amendments to the agreement, and stated that they will file an amended, executed LNG Storage Agreement following Commission approval. With regard to some concerns, TGVI and Terasen Gas explained their position that the wording of the agreement is appropriate and why the agreement should not incorporate TGVI’s General Terms and Conditions.

BC Hydro also noted that Terasen Gas receives several options to use LNG service that is surplus to the firm needs of TGVI and its customers, generally by paying only the variable cost to TGVI of providing such capacity. BC Hydro submitted that this may restrict the future ability of TGVI to offer service to others who may be willing to pay more for it. In several instances, BC Hydro stated that TGVI should hold an auction for such surplus service, in order to generate additional mitigation revenue. In response, TGVI and Terasen Gas propose to amend the LNG Storage Agreement so that surplus service would be allocated pro-rata among firm LNG service holders, stating that this would be administratively simpler than an auction mechanism.

The Commission concludes that the contract terms of the LNG Storage Agreement, with additional amendments proposed by TGV and Terasen Gas, are generally satisfactory. The Commission will confirm that the amendments are included in the revised LNG Storage Agreement when TGV files the document.

Commitment of Terasen Gas to Contract for all Excess LNG Capacity

The term of the LNG Storage Agreement is for 25 years commencing April 1, 2008. TGV has the right to terminate the agreement should construction of the LNG facility not go ahead, by giving notice by November 1, 2006. Two years prior to the April 1 start of each Storage Year, TGV will provide notice to Terasen Gas of the amount of Storage Capacity and Firm Vapourization Rate that will be available to Terasen Gas for that Storage Year, and the agreement provides that Terasen Gas will contract for the amount of service that is set out in the notice. If TGV subsequently determines that additional LNG service is excess to its needs for the Storage Year, Terasen Gas has the right, but not the obligation, to contract for the additional service.

The Commission concludes that the LNG Storage Agreement suitably commits Terasen Gas to contract for the amount of surplus LNG service that TGV determines it can supply, while providing Terasen Gas with reasonable notice about the amount of service that it will have available to it.

Priority Right of TGV to use the LNG Facility

As discussed in the previous section, two years prior to the start of a Storage Year, TGV will identify the amount of Storage Capacity and Firm Vapourization Service that will be provided to Terasen Gas. The Storage Capacity provided to Terasen Gas will be the amount that TGV reasonably forecasts will be surplus to its requirements and not contracted to customers on its system.

The Commission concludes that the LNG Storage Agreement provides TGV and its on-system customers with satisfactory priority and flexibility for use of the LNG facility.

Impact on Transportation Customers on the TGV System

The service provided under the LNG Storage Agreement includes interruptible TGV delivery of natural gas for liquefaction into the storage facility, and firm redelivery to the Terasen Gas system of gas vapourized from storage by displacement of supply. TGV commits to provide Terasen Gas with sufficient interruptible delivery service during the period from March 15 to November 15 to fill the Storage Capacity that Terasen Gas has contracted for the Storage Year. The priority for the delivery of gas to the LNG storage facility will be the same as the priority of shippers using interruptible transportation on the TGV system.

BC Hydro recognized that TGVI has made improvements to the LNG Storage Agreement, but was concerned that it and other interruptible transportation could be curtailed in order to ensure that Terasen Gas will have an opportunity to fill its Storage Capacity. TGVI and Terasen Gas responded that, given the maximum liquefaction rate and the flexibility that TGVI has as to when liquefaction will occur, it is highly unlikely there will be a need to constrain interruptible transportation to fill the LNG facility. Nevertheless, TGVI also submitted that, given the revenue Terasen Gas will be obligated to provide, it should be assured that its capacity can be filled.

The Commission accepts that, given the size of the proposed LNG storage facility and its liquefaction rate, it is unlikely that the need to fill storage will seriously impact interruptible deliveries on the TGVI system. Furthermore, Terasen Gas should have reasonable assurances that it will have an opportunity to fill its Storage Capacity. **The Commission concludes that the provisions in the LNG Storage Agreement regarding the interruptible delivery of gas to the LNG storage facility are reasonable.**

Charges under the LNG Storage Agreement

The LNG Storage Agreement as amended provides that the annual demand charge "...generally will be based on the market cost that would be payable by TGI [Terasen Gas], and allowable as a TGI gas supply cost, for other comparable gas storage service recognizing the on-system and other benefits associated with the LNG service." The Capacity Demand Rate and the Vapourization Demand Rate will be as approved by the Commission from time to time.

The commodity charge under the LNG Storage Agreement will also be as approved by the Commission from time to time. The Liquefaction Commodity Charge of \$0.75 per gigajoule of gas liquefied will be adjusted to reflect changes in the applicable BC Hydro rate.

The proposed annual Capacity Demand Rate of \$1.44 per gigajoule of Storage Capacity, the annual Vapourization Demand Rate of \$57.70 for each GJ/d of Firm Vapourization Rate and the Liquefaction Commodity Charge that are set out in Schedule A, are identical to the rates in the initial year in the draft LNG storage agreement that TGVI filed in the proceeding for the 2004 Resource Plan and CPCN application. In the LNG Storage Agreement applications, TGVI and Terasen Gas justify these rates as being market-based charges that are determined from the cost to Terasen Gas under contracts it has entered into for underground gas storage at the Northwest Natural Mist Storage facility ("Mist"). Since deliverability at Mist declines after the storage inventory falls below 50 percent, TGVI and Terasen Gas consider that 15 day Mist storage is comparable to 10 day LNG storage. The cost of transporting gas to and from Mist was included in the cost of Mist storage. Using an exchange rate of US\$ 0.75/\$Cdn, TGVI and Terasen Gas estimated that the annual cost of one gigajoule of deliverability would be \$80.07 for 15 day Mist storage and \$83.04 for 10 day LNG storage.

In its application, Terasen Gas noted that the location of the LNG facility provides benefits that are not obtained from Mist storage. These benefits include changes to gas redelivery rates within two hours, and deferment of the need to add facilities to reinforce the Terasen Gas Coastal Transmission System.

Avista noted that, while Mist is the only storage facility in the region with incremental capacity, TGVI and Terasen Gas have not pursued opportunities to work with companies that hold storage capacity at Jackson Prairie. Avista submitted that Jackson Prairie storage holders may be able to provide a similar service at a lower cost, and that such possibilities should be explored. In response, TGVI and Terasen Gas noted that Mist is the facility that is currently offering long term storage agreements at fixed prices. Terasen Gas stated that it will continue to require capacity at Jackson Prairie and Mist, and will continue to attempt to negotiate the best possible rates.

BCOAPO noted that, as TGVI has generally claimed that its negotiated costs for Mist storage are confidential, there may be an ongoing issue of transparency when Mist costs are used as a proxy for market rates. BCOAPO stated that the Commission will need to satisfy itself that the comparison to Mist is reasonable. TGVI and Terasen Gas responded that Terasen Gas submits all storage agreements to the Commission, so that the Commission will have the information that it needs to confirm the market rate for storage.

BC Hydro submitted that the LNG Storage Contract does not yet provide the revenue assurance that the Commission sought in the Decision, as it does not contain a schedule or other mechanism to set out the minimum annual payments by Terasen Gas at levels consistent with TGVI's estimates of mitigation revenue. BC Hydro stated that this deficiency should make the Commission wary of approving the agreement in its present form. TGVI responded that in its view the LNG Storage Agreement provides exactly the certainty with respect to mitigation revenue that the Commission sought in the Decision. Terasen Gas contracts for the amount of storage capacity that TGVI identifies will be surplus, and the rates for service will be as determined by the Commission from time to time. Without a schedule of capacity under contract, TGVI submitted that it would not be possible to specify a minimum payment schedule.

The Commission notes that market-based LNG storage charges for Terasen Gas or other customers that are not on the TGVI system were explored in the proceeding for the 2004 Resource Plan and the CPCN application. The approved tariff rates and negotiated charges for Mist storage, the cost of interruptible LNG service and the charges for firm service at other LNG storage facilities in the region were all considered. The Commission accepts that the cost to Terasen Gas of Mist storage is the most comparable proxy. Terasen Gas currently holds a considerable amount of Mist capacity and expects to continue to do so in the future, but nevertheless the Commission expects that Terasen Gas will thoroughly explore all opportunities to obtain lower cost service at Jackson Prairie or other locations.

Several significant assumptions are necessary to calculate a market-based charge for LNG storage that is comparable to the cost of Mist service. These include the cost of transporting gas to and from Mist, the currency exchange rate and the position that 15 day Mist capacity is equivalent to 10 day LNG capacity. For example, if one used a more current currency exchange rate, there would be a larger differential between the proposed LNG charges and the cost of 15 Mist service. Nevertheless, the Commission recognizes the other, non-monetized benefits that Terasen Gas would obtain from LNG service from the TGVI facility justify some amount of

premium for LNG service. **The Commission concludes that the demand charges set out in Schedule A represent reasonable market-based charges for LNG service to Terasen Gas at this time.**

4.0 COMMISSION DETERMINATION

Based on the conclusions in the foregoing sections, the Commission determines that the LNG Storage Agreement fulfils the considerations and requirements that were raised in the Decision. **The Commission approves the LNG Storage Agreement as a TGVI Tariff Supplement. The Commission also approves the annual Capacity Demand Rate of \$1.44/GJ of Storage Capacity, the annual Vapourization Demand Rate of \$57.60 per GJ/day of Firm Vapourization Rate and the Liquefaction Commodity charge of \$0.75/GJ, as set out in Schedule A.**