IN THE MATTER OF

TERASEN GAS (WHISTLER) INC.
2005 RESOURCE PLAN UPDATE AND
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
FOR THE WHISTLER NAUTRAL GAS PROJECT

AND

TERASEN GAS (VANCOUVER ISLAND) INC.
CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY
FOR THE SQUAMISH TO WHISTLER
INTERMEDIATE PRESSURE PIPEINE

DECISION

May 18, 2006

Before:

A.J. Pullman, Panel Chair & Commissioner
R.J. Milbourne, Commissioner
P.E. Vivian, Commissioner

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1.0 BACKGROUND

1.1 Terasen Gas (Vancouver Island) Inc.

In February 1988, Pacific Coast Energy Corporation ("PCEC") an affiliate of Westcoast Energy Inc. ("Westcoast") was awarded the Vancouver Island Gas Pipeline Project by the Province of British Columbia. In September of that year, the Governments of Canada and British Columbia announced their financial support of the project. PCEC designed, constructed, owned and operated the main transmission portion of the Vancouver Island Natural Gas Pipeline. Construction began in 1989 and was completed in 1991. The route of the new pipeline was from the compressor station at Coquitlam via Squamish, the Sunshine Coast, Texada Island, crossing the Georgia Strait and coming ashore on Vancouver Island near Courtenay, and heading south to Victoria, with laterals to Campbell River and Port Alberni. The distribution system at Squamish was converted from propane in 1991. It is owned and operated by Terasen Gas (Squamish) Inc. ("TGS") a subsidiary of Terasen Gas Inc. ("TGI") and an affiliate of the Applicants. The other major Shipper on the new pipeline was a joint venture formed by seven pulp mills to purchase transportation service from the new pipeline. These are referred to as the Vancouver Island Gas Joint Venture ("VIGJV").

Gas distribution rights on Vancouver Island and the Sunshine Coast were awarded in 1989 to the Vancouver Island Gas Co., a subsidiary of Inter-City Gas, which had purchased the former BC Hydro Victoria Gas Division and held the franchise for Nanaimo. In April 1990 Westcoast Energy Inc. acquired ICG Canada Inc., one of whose subsidiaries, ICG Utilities (British Columbia) Ltd. ("ICGBC") was the distribution utility for Vancouver Island and the Sunshine Coast, and which changed its name in November 1990 to Centra Gas British Columbia Inc. ("Centra").

The pipeline and distribution facilities received financial assistance from both the federal and provincial governments, with the VIGJV's mills and distribution system customers being eligible for conversion grants. Under the Consolidated Rate Stabilization Agreement between Centra and the Province, gas rates to distribution customers were decoupled from the cost of

providing service and were set at a discount to oil and/or electricity. The Province provided guarantees through a Rate Stabilization Facility that absorbed the shortfall between revenues from customers and the costs of the transmission and distribution facilities.

By the mid-1990s, due in part to construction cost over-runs and lower than expected price differences between natural gas and oil/electricity alternatives, it was apparent that a financial restructuring of the Pipeline and distribution facilities was needed in an effort to achieve financial viability. The Consolidated Rate Stabilization Agreement was replaced by the Vancouver Island Natural Gas Pipeline Agreement ("VINGPA") in late 1995. The Province of British Columbia made a $120 million lump sum payment as a contribution to capital costs with a corresponding reduction in rate base. Further provincial government assistance was and is provided in the form of gas royalty credits, which are scheduled to cease at the end of 2011. On January 1, 1996, Centra's distribution assets were transferred to PCEC (now a wholly-owned subsidiary of Westcoast). Shortly thereafter changed its name to Centra Gas British Columbia Inc., making this single legal entity the owner and operator of both the transmission facilities from the Lower Mainland to and on Vancouver Island and the distribution facilities on Vancouver Island and the Sunshine Coast.

The VINGPA included a Special Direction to the Commission issued under the Vancouver Island Natural Gas Pipeline Act by the Lieutenant Governor in Council through Order in Council 1510/95. Up to January 1, 2003, rates to Centra's distribution system customers were set according to the Special Direction; for most customers, formula-based rates applied until the end of 2002. The Special Direction stated that beginning January 1, 2003 the Commission was to fix the rates charged by Centra for all customers except the Apartment (ACR-2) class "…so that Centra is able to recover its cost of service in accordance with the regulatory principles that are generally applied by the BCUC from time to time to gas distribution utilities operating within British Columbia".

Service to the VIGJV and TGS is provided under long-term transportation service agreements ("TSAs") that contain agreed upon tariffs. These expire in 2006 or later. In 2001 the Island Cogeneration Project was commissioned at Elk Falls and British Columbia Hydro and Power Authority ("BC Hydro") became a shipper on the Pipeline. Centra and BC Hydro entered into transportation, peaking and other support agreements.

On December 6, 2001, BC Gas Inc. applied to the Commission for approval to acquire from Westcoast a reviewable interest in the shares of Centra. The Commission approved this acquisition by Order No. G-8-02, subject to the consent of the Province. By a Novation Agreement dated March 7, 2002, BC Gas Inc. assumed the benefits and obligations of Westcoast under the VINGPA. The Special Direction was amended to reflect BC Gas Inc. ownership of Centra. On April 23, 2003, Centra's name was changed to Terasen Gas (Vancouver Island) Inc. ("TGVI").

As a relatively small greenfield utility, Centra's market was built from the ground up and its rates were structured to compete with alternative energy sources and to induce potential customers to convert to natural gas. Until 2003 its rates were set at a discount to competing fuels, too low to recover its cost of service and resulting in accumulations to the Revenue Deficiency Deferral Account ("RDDA"). Since 2003 its rates have been based on a cost of service model, incorporating a soft cap mechanism to maintain the competitiveness of rates in the residential and commercial sectors relative to electricity or oil alternatives. The RDDA balance peaked at $88 million in 2002 and had been reduced to $52 million by the end of 2005. TGVI forecasts that it will be fully amortized by 2010

TGVI's rate design application was filed in September 2002 and was intended to provide rate design principles that would guide future rate setting at TGVI and establish rates for each class of service effective January 1, 2003. Commission Order No. G-42-03 which accompanied the Commission June 5, 2003 Decision ("2003 Rate Design Decision") on TGVI's rate design determined, inter alia, that:

- all customers, other than the VIGJV and TGS, must contribute to the recovery of the RDDA (June 5, 2003 Rate Design Decision, p. 26);
- the soft-cap mechanism (where the burner tip rate would float as necessary to respond to changing market conditions) is appropriate to TGVI's circumstances and that the revenue to cost ratios for the core customer classes as reported, are reasonable under the unusual circumstances faced by TGVI (2003 Rate Design Decision, p. 31);
- it would be unreasonable to limit revenue to cost ratios within a narrow range and thereby limit the consideration of other circumstances in the design of rates which meet the public interest. The Commission decided that the rate for Firm Transportation ("FT") service should be set such that the revenue to cost ratio for FT service equals 1.25 (2003 Rate Design Decision, p. 41); and
- the Interruptible Transportation ("IT") rate would be seasonal based on the general principles of maximizing IT revenue (2003 Rate Design Decision, p. 42).

At the time the rate design decision in 2003 was rendered, TGVI offered bundled services to its core customers on Vancouver Island and the Sunshine Coast, and transmission services to TGS, BC Hydro and the VIGJV. The rates for both the VIGJV and TGS had been established by contract and were not subject to regulatory review, as mandated by the Special Direction.

1.2 Terasen Gas (Whistler) Inc.

1.2.1 History of Operations

The propane gas distribution system in Whistler was established in 1980 and owned and operated by the Resort Municipality of Whistler ("RMOW", the "Municipality"). The original propane plant was sited by the Whistler Village Land Co. Ltd. in the parking lot area near the present town centre site. The piping system was sized and designed to feed from this central location.

In 1984 the RMOW decided that the ownership and operation of the system were beyond the scope of its technical and financial capability and offered the propane gas utility for sale. In 1985 ICG Liquid Gas Ltd. submitted the only bid and purchased the system from the Municipality. The Commission granted the purchaser an exemption from the provisions of the *Utilities Commission Act* ("the Act", the "UCA") until December 31, 1994.

The distribution system was purchased by ICGBC in 1987 and the exemption from regulation of the Act was vacated. In 1988 ICGBC expanded into the Whistler Creek area providing service to Whistler Mountain and all adjacent areas. As well, service was extended to Function Junction where a second gas plant was installed. The gas distribution system was also extended into the upper benchlands to provide gas to condominium developments.

During 1989 ICGBC extended service into the gondola areas, Blueberry, White Gold, Nesters Corner and Whistler Cay. Large diameter steel mains were installed providing the infrastructure necessary to maintain adequate gas pressures to the village, in anticipation of plant relocation to the public works yard.

In April 1990 Westcoast acquired ICG Canada Inc., the parent company of ICGBC. In November 1990 ICGBC became Centra Gas British Columbia Inc.

As development progressed at a rapid pace in Whistler, the RMOW requested that Centra look for alternate sites for the propane plant. The Municipality also expressed concern about the tanker truck traffic on its streets. Consequently, in 1993, Centra moved its Nesters plant to its present location adjacent to the municipal works yard.

In 1996 Centra was restructured and the Whistler-based assets of the company were transferred to a new company, Centra Gas Whistler Inc. (“Centra Gas Whistler”). In 2002 BC Gas Inc. acquired the shares of Centra Gas Whistler from Westcoast. On April 23, 2003, the company’s name was changed to Terasen Gas (Whistler) Inc. (“TGW”).

TGW states that it presently delivers more than 750,000 GJs per annum to over 2,350 customers connected by approximately 100 kilometres of distribution pipe and that its propane distribution system is the largest in Canada and one of the largest in North America (Exhibit B1-1, p. 1).

Propane is typically used to provide energy to areas too small or too remote to be economically served by natural gas pipeline systems. This was certainly the case when piped propane service was first introduced to Whistler in 1980. Today, Whistler's demand is greater than that of many of the communities already served by other Terasen Gas utilities in British Columbia (Exhibit B1-1, p. 1).

1.2.2 History of the Whistler Pipeline

Centra and Centra Gas Whistler first developed the concept to build a pipeline to Whistler in 1996 to meet growing demand in the community. Costs were developed on the basis of constructing a NPS 6 steel pipeline operating at 885 psig within the Ministry of Transportation and Highways ("MOT") right-of-way using a highway shoulder alignment. In December 1997 the companies applied for Certificate of Public Convenience and Necessity ("CPCN") for the construction of a pipeline between Squamish and Whistler and for the conversion of the Whistler customers to natural gas use. However, MOT subsequently imposed a "due diligence" stipulation whereby Centra was required to complete the detailed design and third party review for the pipeline project. In March 1988 the CPCN application was withdrawn as it became clear that MOT approval would not be received in time for 1998 construction. In March 1989 MOT issued a letter of intent to "Permit the Construction, Maintenance and Operation" of the pipeline in Highway 99 right-of-way between Squamish and Whistler. However, at this point, the companies had temporarily placed the pipeline project on hold due to capital cost escalation resulting from unfavourable alignment changes (Exhibit B2-1, p. 5).

2.0 THE APPLICATIONS

2.1 Background

Pursuant to Section 45 of the Act, TGW submitted in August 2004 its 2004 Resource Plan to the Commission for review. In the Action Plan section, TGW indicated that it would work with the RMOW and other stakeholders in the region to confirm if the energy load was sufficient and to garner their support to pursue development of a natural gas pipeline option to the Whistler area.

In a letter to TGW dated September 24, 2004, the Commission noted that the demand scenarios in the 2004 Resource Plan are dependent, to a large extent, on the outcome of the then on-going RMOW planning process leading to its Comprehensive Sustainability Plan. The Commission therefore notified TGW that a review would only take place at the sooner of completion of the RMOW's plan, a TGW application for a CPCN, or three months.

On December 2, 2004 TGW wrote to the Commission and requested a delay in its review of the Resource Plan so that TGW could undertake further analysis and consultation to identify the best solutions to meet Whistler's needs.

On December 12, 2005, TGW filed with the Commission its 2005 Resource Plan Update ("the Resource Plan") that provides an assessment of the current and future energy requirements at the RMOW and concludes that the existing propane grid system should be converted to natural gas.

On December 16, 2005, TGW filed with the Commission its application for a CPCN to convert its system to natural gas and for approval to enter into a long-term natural gas transportation agreement with TGVI. In the application, TGW also requests approval to make a capital contribution to TGVI and to add the contribution to rate base, to amortize the net book value of the propane facilities and to recover pipeline study costs incurred prior to 2004 ("the TGW Application"). Subsequent to the Application, TGW sought Commission approval to

discontinue propane distribution service upon commencement of natural gas service.

Also, on December 16, 2005, TGVI filed with the Commission its application for a CPCN for construction of a natural gas pipeline lateral to connect RMOW to the TGVI transmission system at Squamish and to enter into a Transportation Service Agreement with TGW ("the TGVI Application"). The Resource Plan Application, the TGW Application and the TGVI Application will be referred to collectively as the "Applications", and TGVI and TGW as the "Companies".

The Companies requested that the Commission review the Applications concurrently through a joint proceeding by way of a written review process.

A Procedural Conference regarding the regulatory process for the review of the Applications was held on Tuesday, January 17, 2006 to address procedural matters, which included the following:

- identification of the principal issues arising from or related to the Applications;
- scope of the Commission's review of the Applications;
- whether Intervenors intend to file evidence;
- whether a written or oral hearing is to be held to examine the filed material and the respective location;
- steps and timetable associated with the regulatory review process; and
- other matters that will assist the Commission to efficiently review the Applications.

A Workshop was held in Vancouver on February 2, 2006, and the PowerPoint presentation was filed by the Companies as Exhibit B1-7. On February 6, 2006, the Commission issued an Issues List (Exhibit A-9).

The Commission held a Second Procedural Conference on March 14, 2006 and the Companies and the Intervenors were asked to provide submissions on whether to proceed to, and the timetable for, an oral or written hearing; and on issues which have not been reviewed adequately through information requests and responses. Following this conference the

Commission issued Order No. G-23-06 determining that the Applications would be examined through a written hearing process, and that the Companies would file executed Capital Contribution and Transportation Service Agreements by March 31, 2006.

The Companies filed written submissions on March 31, 2006. Intervenors filed written submissions on April 13, 2006 and reply written submissions were filed by the Companies on April 21, 2006.

TGW 2005 Resource Plan Update

On December 12, 2005, TGW files the Resource Plan, which according to TGW, is built on the assessment provided in the 2004 Resource Plan and takes into consideration RMOW's completed comprehensive sustainability plan *Whistler 2020: Moving Toward a Sustainability Future*, and other developments (Exhibit B1-1, Cover Letter, p. 1).

TGW's Action Plan describes the actions that TGW intends to pursue over the next 4 years based on the information and evaluation provided in the Resource Plan supporting the extension of natural gas to Whistler:

1. Seek approval from the Commission to convert the existing propane system to natural gas and enter into an agreement with TGVI for natural gas transportation services.
2. Manage the capacity of the existing propane system through bridging facilities or limit customer additions.
3. Continue to examine demand side management ("DSM") opportunities in bridging the operating requirements of the existing system until the natural gas pipeline is in place and continue monitoring the implementation of Whistler 2020 and the Sustainable Energy Strategy as a DSM resource.
4. Continue Support of RMOW's Strategic Vision and Plan, Whistler 2020 and the implementation of the Sustainable Energy Strategy and continue to nurture existing partnerships.

5. Continue to identify and monitor potential new development along the Sea to Sky corridor that could lead to efficient and cost effective energy load additions and to work with development proponents to provide natural gas at competitive rates.

(Exhibit B-1, pp. 79-80)

2.2 Terasen Gas (Vancouver Island) Inc.

TGVI applies to the Commission pursuant to Section 45 of the Act for a CPCN for the Squamish to Whistler Intermediate Pressure Pipeline ("IP Pipeline") proposed to connect the existing TGW distribution system to TGVI's existing natural gas transmission system. TGVI also applies to the Commission pursuant to Section 61 of the Act for approval to enter into a Transportation Service Agreement.

2.2.1 Pipeline Concept

The Companies state that the pipeline concept has evolved with changes in the development of the MOT Highway 99 Upgrade project to recognize the potential benefits of working with the new "design-build" highway alignment from Squamish to Whistler. In addition, the Companies have re-defined the project as a NPS 8 steel pipeline operating at 300 psig as a result of the revised long-term demand presented in the Resource Plan. The revised pipeline specification meets MOT policy for installation within road shoulders and bridges subject to certain conditions. In September 2005 MOT issued a letter confirming agreement in principle to permit construction of the IP Pipeline within the 49 kilometers of Highway 99 right-of-way that the pipeline route will follow. TGVI submits that the ability to coordinate pipeline construction with the Highway 99 Upgrade project will enable TGVI to construct the IP Pipeline at costs that allow TGW to offer safe, reliable and affordable natural gas service to its customers (Exhibit B2-1, p. 5).

2.2.2 Pipeline Scope

The IP Project consists of the construction of an NPS 8 steel intermediate pressure pipeline starting at the existing TGVI Squamish meter and ending at a TGW regulating station in the Function Junction area of Whistler. The basic pipeline design and operating parameters are set by factors that include:

- the approximate 50 km length of the pipeline required to achieve the interconnection;
- the lowest pressure normally available at the TGVI mainline transmission system;
- the pressure required by the existing TGW distribution system;
- the future demand growth in the TGW distribution area;
- the terrain that the pipeline must traverse including environmental and geophysical constraints; and
- any operating restrictions that may be imposed by authorities having jurisdiction.

To ensure operating pressure limits are maintained and gas changing custody is measured, metering/regulating stations are generally required at each point where there are operating pressure and/or custody changes.

Application and evaluation of these basic pipeline design and operating parameters resulted in the following scope for the IP Pipeline:

- Pipeline – Approximately 50 kilometres of NPS 8, 300 psig maximum operating pressure steel.
- Route and alignment – From Squamish to Whistler using the highway and municipal road right-of-way, with a preferred alignment primarily within the road prism (road structure including ditch area).
- Station – Additional metering and regulating equipment at the existing TGVI Squamish meter station facility to reduce the pressure from a maximum of 2160 psig on the TGVI transmission system to 300 psig maximum on the IP Pipeline.
- Interconnect to TGW – the IP Pipeline will interconnect with TGW at a new regulating station in the Function Junction area of Whistler to reduce the pressure from 300 psig on the proposed IP Pipeline to 80 psig on the existing TGW distribution system (Exhibit B2-1, p. 6).

2.2.3 Project Schedule

TGW states that the project schedule is driven by the requirement to coordinate the project with the major Sea to Sky Highway improvement initiative. Regardless of the level of actual construction coordination with S2S Transportation Group ("S2S") the main contractor to the MOT, the schedule coordination is a requirement since the entire highway and all work activities between Horseshoe Bay and Whistler area are on a 45-minute traffic delay maximum for the duration of the improvement work. Nevertheless, TGVI is targeting a high level of construction coordination with S2S in order to achieve the result of least cost and least traffic disruption.

The S2S design build work is now underway and the base "pre-paving" work will continue through the fall of 2008. Since the S2S approach is to proceed with construction as design continues in other areas, this means that TGVI will have to adopt a similar approach. This will result in a project schedule for the IP Pipeline as follows:

Construction of Pipeline	piecemeal	June 2006	August 2008
Design/construct station	one project	January 2008	August 2008
Testing	piecemeal	July 2006	August 2008
Commissioning	full project	August 2008	August 2008
In Service	full project	September 2008	September 2008

Source: Exhibit B2-1, p. 20, Table 5 IP Pipeline Project Schedule

Rather than a conventional pipeline project, the project will have the look and feel of a series of small projects, and thus the execution will be handled in a manner similar to conventional distribution system main extensions or multi-year pipeline upgrade projects (Exhibit B2-1, p. 20).

2.2.4 Capital Costs

TGVI states that routing details and corresponding MOT permit approvals for the IP Pipeline, including approval for bridge crossings, cannot be completed until S2S completes detailed designs for each section of the S2S design build project. Further, MOT has clarified that bridge crossings will only be approved on an individual basis whereby the detailed design bridge solution is assessed against the feasibility of crossing alternatives. In order to develop a high confidence level under these circumstances, TGVI has prepared a series of cost estimates, all based on the highway alignment, which consider the following:

- a "low cost" scenario whereby construction is well coordinated with S2S, alignments are predominantly in the shoulder and MOT provides approval to install the pipeline on all new bridges;
- a "base cost" scenario whereby a ditch alignment is predominant but the construction is out of sequence with S2S and separate aerial crossings are employed; and
- a "high cost" scenario where by the construction is out of sequence with S2S and includes unfavourable alignments and extensive use of horizontal directional drilling (Exhibit B2-1, p. 22).

TGVI estimates the cost of the three scenarios to be as follows:

IP Pipeline Cost Scenario $000s	**Low**	**Base**	**High**
Direct Costs (2005$)	$27,692	$33,813	$39,692
Inflation	1,466	1,630	2,100
AFUDC	1,374	1,673	1,974
Total Capital (As Spent)	$30,532	$37,116	$43,765

Source: Exhibit B1-28, p. 23

2.3 Terasen Gas (Whistler) Inc.

TGW applies to the Commission pursuant to Section 45 of the Act for a CPCN for the Whistler Natural Gas Project. TGW seeks approval to:

- convert the existing propane system to natural gas;
- construct an IP/DP regulating station at Function Junction;
- enter into a Transportation Service Agreement and a Capital Contribution Agreement with TGVI;
- add the capital contribution amount to rate base at the time natural gas service commences, and amortize the capital contribution over 50 years (i.e. 2 percent per year);
- transfer the net book value of the propane facilities (less salvage value of the propane tanks) and net proceeds from the sale of land into a deferred charge for recovery in rates over a 20-year period (5 percent amortization rate) commencing in 2009;
- recover pipeline study costs incurred prior to 2004 and currently recorded in a non-rate base deferral account (Exhibit B1-2, p. 2); and
- discontinue propane distribution service upon commencement of natural gas distribution service (TGVI/TGW Submission, p. 2).

2.3.1 Scope

The Project involves the following components:

- construct a pressure regulating station in the Function Junction area of Whistler;
- convert the distribution piping system from propane to natural gas by purging, regasifying, and leak-testing the distribution piping system;
- upgrade TGW-owned customer meters and regulators and retrofit customer appliances to use natural gas;
- decommission the existing propane storage and rail-offloading facilities; and
- dispose salvageable equipment and redundant land.

2.3.2 Project Schedule

TGVI expects that the IP Pipeline will be commissioned by the end of August 2008. TGW states that planning and IP/DP station construction must be complete by the end of August 2008 in order for the subsequent upgrades and conversions to complete by October 2008 for the beginning of the winter 2008/09 season. It proposes to decommission facilities and equipment and dispose of land in 2009.

2.3.3 Project Costs

TGW estimates that the cost of the meter station conversion and conversion will range from $5.378 million to $5.502 million as spent including Allowance for Funds Used During Construction ("AFUDC") (Exhibit B1-2, p. 4).

3.0 TGW RESOURCE PLAN

3.1 Introduction

The Commission has directed energy utilities subject to its jurisdiction to file annual resource plans to implement the policy actions of the Provincial Government's November 2002 energy policy "Energy For Our Future: A Plan for BC ("Energy Plan"). TGW filed a Resource Plan with the Commission in August 2004. In December 2004, it requested a delay in the review in order to take into consideration the RMOW's Comprehensive Sustainability Plan which was then underway.

The Resource Plan is a result of accommodating the RMOW's plan entitled "*Whistler 2020: Moving toward a Sustainable Future"*. The Resource Plan contains:

- system capacity factors such as natural gas and propane commodity price forecast, delivery logistics, system capacity related to storage and delivery;
- long-term annual energy and demand design day forecasts; and
- alternatives in the resource portfolio, the costs and customer rate impacts and socio-economic impacts.

The conclusion of the Resource Plan is that the best energy resource for meeting Whistler's requirements is to extend natural gas service to the community through the construction of a natural gas pipeline and conversion of the existing propane system (TGVI/TGW Submission, p. 5).

3.2 Demand Forecast

3.2.1 TGW's Analysis

TGW's service area is currently limited to the RMOW. This allows TGW the advantage of incorporating detailed RMOW planning data as inputs into the forecasting process.

The Resource Plan forecasts annual energy demand and design day demand over a 15- and 25-year horizon (Exhibit B1-1, Appendix D; Exhibit B1- B4, BCUC IR-1 15.1; BCUC IR-1 4.4).

The annual energy demand forecast provides information to ensure an adequate energy supply. Key input assumptions in the forecasting process are RMOW development projections such as the cap on the number of allowable bed units, known development proposals, and use per account for different customer segments.

The design day forecast is the peak day demand that must be met by the system to ensure safe, reliable delivery of fuel. For a tourist resort municipality, the peak need is most likely to occur when visitor levels in Whistler are very high; namely, Saturdays falling in the ski season. The forecasting methodology includes the statistical analysis of the full history of temperature data and the likelihood of occurrence of the design day in a 20-year return period.

The demand forecast is largely impacted by the Sustainable Energy Strategy, which is Whistler's vision on sustainability through a cost-effective transition to renewable forms of energy and technologies. The role that natural gas plays in such a transition provides the framework for three potential future scenarios. The alternative scenarios reflect the varying speed and degree of implementation, which the municipality is able to achieve towards the sustainable future as set out in *Whistler 2020*. The key assumptions to the speed and degree of implementation are local policy and community support, and federal and provincial funding (Exhibit B1-1, pp. 20, 21).

TGW identifies three demand scenarios in the Resource Plan:

- Business as Usual (High) Scenario - assumes that other new and existing residential and commercial developments continue to utilize traditional energy systems resulting in an increase in propane or natural gas space heating load over time;
- Sustainable Technology (Base) Scenario - assumes that conditions are favourable for new technology implementation in both heating and transportation sectors. It assumes, however, that retrofit Ground Source Heat Pumps ("GSHP") installations are generally at a competitive disadvantage. TGW views this scenario as being most reflective of a "Base Case" Scenario; and

- Aggressive Technology (Low) Scenario - assumes that most of the barriers to the implementation of alternative energy technology are removed at a much faster pace than the other two scenarios.

Notwithstanding the three demand scenarios, TGW states that a propane solution would not provide the same forecast as a natural gas solution under the same scenario. For example, under the high case, a propane supply is not deemed to be a solution to the high demand. Specifically, some of the sports facility and fleet vehicle loads are included in the natural gas analysis and are not included under a propane solution (Exhibit B1-1, p. 23).

In forecasting demand, TGW assumes that occupancy rates remain unchanged throughout the forecast period, and that use rates remain constant in the future (Exhibit B1-4, BCUC IR-1 9.1; BCUC IR-1 9.3.2.1).

TGW states that to be consistent with the RMOW's vision, the demand forecasts include supplying natural gas energy to a range of vehicle fleets currently in use in Whistler [natural gas for vehicles ("NGV")], including transit buses, municipal vehicles, shuttles, taxis, resort vehicles and waste management vehicles. However, TGW understands that BC Transit has specified that any costs specifically related to natural gas in excess of what a standard diesel bus and associated diesel fuel and maintenance facility shall be covered 100 percent by the RMOW and its transit partners (Exhibit B1-4, BCUC IR-1 12.2.2).

The Resource Plan Base Scenario results in a peak day demand forecast that is lower than the lowest scenario presented in TGW's 2004 Resource Plan. TGW ascribes this reduction as resulting from dialogue with the RMOW and the publication of the RMOW's plan. TGW adds:

> The primary difference between the 2004 and the 2005 forecasts is the assumption that alternative energies will play an increased roll in Whistler's energy future. Conversions to GSHP technology and Greenfield GSHP developments were not contemplated in the TGW 2004 Resource Plan. In the higher demand scenarios described in the 2004 Resource Plan it was also assumed that natural gas would be the primary space heating fuel used in the new neighbourhood developed around the Athlete Village (Exhibit B1-4, BCUC IR-1 4.4).

The demand forecast for 2008 (the year targeted for the IP Pipeline completion) under the three scenarios for the two natural gas and propane energy alternatives are summarized in Table 1 below.

Table 1 Comparison of Demand under the three scenarios and the two fuel sources

	BASE SCENARIO		**HIGH SCENARIO**		**LOW SCENARIO**	
	Natural Gas	**Propane**	**Natural Gas**	**Propane**	**Natural Gas**	**Propane**
Annual Demand GJ/year	800,494	754,287*	808,908	793,047**	785,796	752,346*
Design Day Demand GJ/day	7,331	6,601*	7,437	6,942**	7,114	6,598*

Note: *constrained forecast, propane demand limited by current capacity
** Propane demand with system expansion
Source: Exhibit B1-1, Appendix D Tables; Exhibit B1-4, BCUC IR-1 15.1

TGW submits that the natural gas demand represented by the Sustainable Technology (Base) Scenario is reasonable and should be accepted by the Commission (TGVI/TGW Submission, p. 11).

3.2.2 Intervenors' Positions

The Commercial Energy Consumers Association of British Columbia ("CEC") submits that the analysis has downplayed the possibility of significant conversion to electric resource and that BC Hydro's green energy initiatives may impact on the RMOW sustainable energy strategy. The CEC also questions the assumption that the success of introducing NGV in Whistler would be any more favourable than the less than favourable history of success of NGV elsewhere in TGI's service territory.

The CEC cites its concerns with the declining occupancy rates in Whistler since the year 2000 (CEC Submission, pp. 6-7).

VIGJV makes the observation that the TGW proposal to convert from propane to natural gas enjoys widespread community support (VIGJV Submission, p. 1).

The RMOW submits that:

> In order to provide more certainty and reduce risks with respect to energy demand, Whistler Council passed the following resolution on September 6, 2005:
>
> *That Council support the necessary and appropriate regulations and by-laws to support a renewable district energy utility, including the requirement for new developments to connect to the combined gas and renewable district energy utility, where possible, as opposed to relying on the traditional baseboard electric heating;*
>
> *That Council direct staff to develop and implement a natural gas vehicle strategy which includes the conversion of appropriate municipal vehicles and, in partnership with key stakeholders such as BC Transit and Carney's Waste Systems, conversion of other fleets such as WAVE buses and waste vehicles; and further*
>
> *That Council support Terasen's applications to the British Columbia Utility Commission for the construction of a natural gas pipeline from Squamish to Whistler and the conversion of the Whistler propane system to natural gas.* (RMOW Submission, p. 1)

3.2.3 Views of the Commission Panel

The Commission Panel notes the strong support from the RMOW for natural gas and renewable sources of energy and expects that the RMOW will continue to use its best efforts to ensure that the benefits of its support are realized. In addition the Panel recognizes the impact that dialogue with the RMOW and publication of the RMOW's plan has had on TGW's Resource Plan. The Panel is satisfied that TGW has used the best information available to it in preparing its Resource Plan. Forecasting is difficult at the best of times and the Panel is aware of the many seemingly extraneous factors that might affect the long range forecast of a resort destination like Whistler that would not have as significant an effect on a similar sized municipality elsewhere in British Columbia. Those intervenors, primarily CEC, who challenged the assumptions did not offer up suggestions of their own but focused more on the risk that such assumptions posed to customers outside Whistler. The Panel addresses such risks elsewhere in this decision.

The Panel accepts TGW's demand forecasts as set out in its Resource Plan.

3.3 Forecast Gas and Propane Prices

3.3.1 TGW's Forecast

TGW states that the historical commodity price relationships between crude oil, propane, and natural gas at major North American hubs generally track one another. Propane competes mainly with crude oil-based fuels. Although propane is produced from both crude oil refining and natural gas processing, its price is influenced mainly by the cost of crude oil. However, when natural gas prices spike, propane prices tend to follow natural gas upward. This happens because propane producers have the option of leaving propane in the natural gas stream and selling it as natural gas. Hence, the propane price must be high enough to provide the incentive for producers to refine the propane from the natural gas. The result is that propane is almost always priced at a premium to natural gas (Exhibit B1.4, BCUC IR-1 48.3).

TGW's historical annual average cost of propane at Whistler is compared to TGI's annual average cost of gas to serve its Lower Mainland customers. In this comparison, the propane transportation costs to Whistler are included in the cost of propane, and TGI's midstream costs are included in the cost of gas. The average difference over the period 2000-2004 is approximately $3.20 per GJ.

TGW states that in its long term planning for customer growth and facility addition, it uses third party commodity price forecasts prepared by GLJ Petroleum Consultants Ltd ("GLJ") a private petroleum industry consultancy that provides natural gas and oil product forecasts on a quarterly basis (Exhibit B1-1, p. 15).

TGW compares the propane/gas differential from forecasts prepared by GLJ with the indicated costs of propane at Whistler and natural gas at Sumas based on the NYMEX price strips for crude oil and natural gas as follows:

	Based on NYMEX January 3, 2006 Price Strip			Based on GLJ October 2005 Price forecast		
	Propane at Whistler	TGW NG at Sumas	Differential	Propane at Whistler	TGW NG at Sumas	Differential
2008	16.35	11.32	5.03	12.62	8.49	4.13
2009	16.69	10.53	6.16	12.13	7.97	4.15
2010	16.46	9.77	6.69	11.90	7.70	4.19
2011	16.33	9.30	7.02	11.66	7.42	4.24
2012	16.28	8.96	7.32	11.73	7.43	4.30

Source: Exhibit B1-4, BCUC IR-1 23.2

TGW notes that the data in the above table compare the delivered cost of propane at Whistler with the projected TGW cost of gas before TGVI transport charges and that the cost of propane delivered to Whistler will also be impacted by the higher transportation costs due to the increased charges by CN Rail and the change in mix between rail and truck transport (Exhibit B1-4, BCUC IR-1 23.1).

TGW concludes that under the Base Case Scenario, the Natural Gas alternative has the lower 15-year levelized average unit cost of $16.65 at a discount rate of 5.76 percent compared to $17.52 for Propane No Expansion and $19.78 for Propane Limited Expansion, as shown in the following table:

Table 2 Natural Gas Alternative Compared to Propane Alternatives

Table 7-1 Average Unit Costs over range of Demand Forecasts

Table from Page 50 of original filing
(Revised March 17, 2006)

Demand Forecast	Alternative	Average Unit Cost (C$/GJ)			
		Discount Rate - 5.76%		Discount Rate - 10%	
		15-year levelized	25-year levelized	15-year levelized	25-year levelized
Low	Propane	$17.84	$18.98	$17.72	$18.54
	Natural Gas	$17.38	$17.88	$17.34	$17.70
Base	Propane	$19.78	$20.76	$19.69	$20.40
	Propane (no expansion)	$17.52	$18.53	$17.42	$18.15
	Natural Gas	$16.65	$17.05	$16.64	$16.92
High	Natural Gas	$16.24	$16.52	$16.26	$16.45

Source: Exhibit B1-31, p. 1

3.3.2 Intervenors' Positions

None of the Intervenors challenged TGW's forecast of propane and natural gas prices, or the average unit cost levelized over 15 and 25 year periods.

3.3.3 Views of the Commission Panel

The Commission Panel accepts TGW's forecast of propane and natural gas prices. The Panel's view of the differential is that although it is forecast by TGW to hover in the $4.20 range, compared to the recent history in the $3.20 range, the forecast appears reasonable when compared to what the NYMEX strips are telling the marketplace. The Panel finds the differential forecast to be acceptable.

3.4 Propane Supply

3.4.1 Existing Plant Description

Propane is currently supplied to Whistler through two propane plants that receive, store and vaporize liquid propane. The Nesters plant is the main plant and consists of 11 x 30,000 US gallon (113,500 litre) storage tanks and three vaporizers. The Function Junction plant is a secondary plant that consists of 4 x 30,000 US gallon storage tanks and one vaporizer. The two plants are interconnected by an 8 inch steel backbone distribution pipeline. Propane is shipped to Whistler primarily by rail to a third site, the Mons siding, which consists of three rail offloading towers (the third tower being newly constructed since TGW filed this CPCN Application) and is connected to the main Nesters plant by a 1.2 km long 3-inch liquid pipeline. Propane is also shipped to Whistler by road and can be offloaded at either plant site through truck tanker terminals at each of the two plant facilities.

TGW states that supply reliability is dependent on well coordinated and uninterrupted rail and road transport deliveries, and that it plans to ensure reliability during possible supply disruptions such as road or rail closures. It plans resource additions for sufficient supply for

four days during winter peaking conditions and calculates that the four coldest days storage requirements for winter 2005 are 22,471 GJ (Exhibit B1-4, BCUC IR-1 18.2).

BC Rail was acquired by CN Rail in 2004 and the change in ownership has resulted in new issues related to delivery reliability and propane storage (Exhibit B1-8). As a result TGW states that it has decided, in consultation with its propane advisors, to increase its reliance on truck transportation to address uncertainty in rail service, to the extent that truck deliveries will make up 15 percent of total deliveries in 2006. In 2001, the market share of truck deliveries was 1.6 percent (Exhibit B1-4, BCUC IR-1 25.1; TGVI/TGW Submission, p. 12).

3.4.2 Design Criteria

TGW states that the combined working storage capacity of the two plants is 22,280 GJ (Exhibit B1-15, p. 2). TGVI's calculation of working storage capacity is based on maximum working fill levels for the Nesters and Function Junction plants of 60 percent and 80 percent, respectively. While codes allow for tanks to be filled to a level of 80 percent, TGW states that it has chosen a 60 percent design fill level at the Nesters plant to allow for the fact that tanks cannot be filled until the levels are partially depleted and to allow for efficiencies gained by emptying three rail cars at a time (Exhibit B1-15, BCUC IR-1 19.1).

TGW states that it utilizes 15 percent as the minimum working fill levels for both plants based on the operating experience of TGW and others. In addition, TGW states that there is an increased tendency for propane to vaporize due to low pressures at lower tank levels and that there is an increased risk of pump failure due to the lower head pressure (Exhibit B1-5, BCUC IR-1 19.1).

3.4.3 Expansion Options

TGW outlines three different options for continuation of propane service:

- maintain the existing system and limit load attachments to that which the system can handle without further improvement;
- replace existing tanks in the Nesters site with larger tanks; and
- construct a third plant site and rail offloading facility south of Whistler.

The option of maintaining the existing system limits capital spending to that required to overhaul or replace equipment already in service. TGW states that the two current plant sites are within built up areas and states that there are no viable options for either further development of the existing sites or for acquisition of adjacent lands (Exhibit B1-1, Appendix G).

TGW's second option is to replace the existing tanks at the Nesters site with larger tanks. This option consists of reconfiguring the Nesters plant with 9 x 45, 000 US gallon tanks and adding additional vaporization. TGW states that as part of this option an expansion of the Mons siding would also be required to add a fourth offloading tower to match the new plant capacity. The total increase in capacity is estimated to be approximately 15 percent and TGW estimates the cost of this option to be $9.6 million and that this option appeared to offer some possibility of staging the work over a period of time to match more closely capacity increases with load growth (Exhibit B1-4, BCUC IR-1 56.3).

TGW states that construction of a third plant site offers the largest potential for increasing capacity under propane service. Such an option is examined by TGW and consists of the initial installation of 4 x 30,000 US gallon tanks at a new Cal Cheak site, ancillary equipment and an 8 km liquid pipeline back to the Function Junction plant where vaporization capacity would be increased and the propane vaporized. The Cal Cheak site would also require a new rail offloading facility. TGW estimates the cost of this option at $18.61 million. The largest cost items associated with this proposal are the liquid pipeline at $6.53 million and the 16-acre site proposed for the Cal Cheak plant site at $5.2 million (including right-of-way and other related

land development costs) (Exhibit B1-4, BCUC IR-1 52.2).

3.4.4 Intervenors' Positions

The RMOW is the only intervenor to make a submission on the subject of propane supply. It unequivocally states:

> Whistler does not support a third propane storage site due to community planning issues. There are concerns with the existing propane storage sites including proximity to residential areas, compatibility with a resort community setting, noise due to shunting of rail cars, and traffic volume.
>
> The community also has serious safety concerns with the storage of propane on rail cars and tanks.
>
> We believe the funds that would otherwise be allocated to the construction of a third propane site would be better used to construct a safe and reliable natural gas pipeline. This would eliminate the concerns associated with the propane storage, supply and address future energy requirements (RMOW Submission, pp. 1-2).

3.4.5 Views of the Commission Panel

The Commission Panel notes that while there may be some validity to TGW's design criteria, there is an inconsistency with that used at the Function Junction plant, which utilizes the maximum allowable level under the codes even though the same basic principles of depleting tanks before they can be replenished applies. Further, TGW has not taken in to account the inventory resulting from the general practice of keeping 3 to 5 rail cars full of propane sitting at the Mons siding (particularly when there are signs of extreme cold weather approaching) ready to be loaded into the Nesters tanks. Three railcars full of propane are equal to approximately 27 percent of the capacity of the Nesters plant. As a result, the Commission Panel finds the design criteria utilized by TGW to be unduly conservative.

The Commission Panel is also aware that design limits are established for extreme weather conditions (one in 25 years) where vaporization in the tanks is less likely to occur and that under normal operating conditions tank levels would be replenished before minimum levels were reached. Therefore, the design limits are viewed as extreme limits and are not as normal operating parameters. The Commission Panel is prepared to accept the use of 15 percent as the lower level design limit for the purposes of this hearing. The Panel notes that using 80 percent and 15 percent limits would increase the storage capacity of the system to 28,770 GJ, which should meet the short-term needs of Whistler.

As the Sustainable Technology (Base) Scenario shows only minimal load growth after 2008, it is possible that this capacity may also be capable of meeting the longer term needs of Whistler. Nevertheless, the Commission Panel accepts that the current capacity of the existing propane storage facility is becoming marginal and, depending on future demand growth, may be inadequate to meet the long-term needs of Whistler.

Considering the uncertainty in the demand forecasts for Whistler, the Commission Panel cannot rule out the possibility that TGW will need to meet the Business as Usual (High) Scenario and accepts that it is prudent to plan to meet long-term needs that can only be met by either a new pipeline or by some form of expansion of propane facilities, either by increasing the tank size in Nesters plant or by the acquisition of a new site. **The Panel notes the RMOW's opposition to a new site and concludes that converting from propane to natural gas with the new pipeline is the more suitable method of meeting the long-term needs of Whistler, all else equal.**

3.5 Demand Side Management

3.5.1 TGW's Position

Another alternative open to TGW and its customers for meeting long-term demand in Whistler is to reduce demand to match the current system capacity. TGW states that it initiated a third party study to identify energy efficiency opportunities and document the likelihood of energy

efficiency savings deferring capital system improvements (Exhibit B1-1, p. 32).

TGW acknowledges that while the DSM Study completed in January 2004 has provided the RMOW with a wealth of valuable demand side knowledge that has gone into the decision making process that has culminated in the community plan, a number of the potential actions identified in the study, e.g., reduction in use of outdoor hot tubs and patio heating, turned out to be unrealistic from a resort operations perspective (Exhibit B1-4, BCUC IR-1 16.1).

TGW submits that any end-use conservation measures undertaken by its large commercial customers are already reflected in their annual use rates (TGW/TGVI Submission, p. 8).

3.5.2 Intervenors' Positions

The RMOW submits its desire for TGW to pursue DSM programs during the natural gas conversion program, in the form of reducing overall energy use and encouraging customers to convert electric water heaters to natural gas heaters (RMOW Submissions, p. 3).

3.5.3 Views of the Commission Panel

The Panel accepts TGW's efforts in this regard, and expects the utility to work with the RMOW to promote energy efficiency and the choice of the most suitable energy sources that will have a beneficial effect on utility costs in Whistler.

3.6 Commission Findings

Summary of the Commission Panel Findings

The Panel is satisfied that TGW has taken all reasonable steps to establish the long range demand forecast set out in its Resource Plan.

So far as concerns commodity prices, the Panel is satisfied that TGW has taken all reasonable steps to establish the long range price forecasts of natural gas at Sumas and propane at Whistler set out in its Resource Plan.

So far as concerns propane supply options, the Panel is satisfied that TGW has examined the options available to it and finds that neither of the options is consistent with the RMOW's sustainable energy strategy and would likely encounter difficulty in obtaining the necessary permits to proceed.

With respect to DSM, the Panel is satisfied that TGW has taken it into account in its demand forecasts.

Accordingly, the Commission Panel finds that TGW's 2005 Resource Plan Update is consistent with the Commission's Resource Planning Guidelines and accepts the plan as filed. In addition, **the Panel accepts the major finding of the plan; namely, that construction of a pipeline from Squamish to Whistler and the conversion of Whistler from propane to natural gas are, in principle, in the public interest.**

4.0 TERASEN GAS (VANCOUVER ISLAND) INC.

4.1 IP Pipeline

4.1.1 Technical Issues

TGVI proposes an IP Pipeline which is a 219 mm x 4.78 mm WT (NPS 8 x .188" WT) grade 290 or grade 359 steel pipeline operating at 2,070 kPa (300 psig). TGVI submits that the pipeline is to start at the TGVI meter station site on Industrial Way in Squamish and is to terminate at a TGW regulating station in Whistler south of Function Junction at a site that has yet to be determined, making it approximately 50 km long. TGVI states that the pipeline will have a maximum capacity of 12,000 GJ/day.

TGVI states that the high pressure transmission system off which this lateral will be constructed has a current capacity of approximately 153,000 GJ/day. This system capacity is based on current data for distribution of the load and agreements with both TGI and BC Hydro to support higher inlet pressure at the Coquitlam compressor station. The proposed Whistler lateral is at a point on the system close to the start of the pipeline (70 km) and the small load therefore has only a minor impact on overall system capacity. TGVI states "the addition of the Whistler load does not trigger a requirement for any additional facilities" (Exhibit B2-1, p. 9).

TGVI identifies a number of issues stemming from the rough mountainous terrain that the pipeline will traverse and the alignment within the shoulder of the highway, as chosen by TGVI. However, TGVI states that it assessed many different options and has chosen the alignment that provides "the safest, least cost and most easily constructed route with the lowest potential to result in impacts to environmental and land use values" (Exhibit B2-1, p. 14). In support of its determination, TGVI provides a copy of a study completed by Integrated Pipeline Projects Inc. ("IPPI") that concludes the chosen route was the most likely to be the least cost and have the lowest schedule risk of the routes analyzed (Exhibit B2-1, Appendix 4).

TGVI notes that the proposed routing for the pipeline is predominantly within the Highway 99 right-of-way and the road is scheduled for improvements over much of the length of the pipeline during the 2006-2008 period. The MOT provides a Letter of Agreement in Principle to the construction of the pipeline in the road shoulder, subject to a number of terms and conditions (Exhibit B2-1, Appendix 1). The most significant of these terms and conditions is that the pipeline's construction is not to interfere with highway's construction and that it is to be completed in conjunction with the road improvements. This dictates that the design and construction of the pipeline be coordinated with the MOT's main contractor, S2S, and that it be carried out in stages over the same three-year period as the highway improvement work.

In considering the use of bridges for construction of the pipeline, the MOT states in its Letter of Agreement in Principle "For bridges, intermediate pressure pipelines up to 324 mm in diameter are permitted only if the bridge is in a low risk seismic zone. The Sea to Sky Highway is located in one of the most active seismic zones in the province. In addition, the bridges are also a high security risk, thus, we do not support the construction of the pipeline on our bridge structures. We would only consider this on an individual basis if you can demonstrate that there are no other viable alternatives or the bridge is built to modern earthquake standards" (Exhibit B2-1, Appendix 4).

TGVI submits that there is "reasonable potential for MOT to provide the necessary approvals regarding bridge crossings and pipe placement to move costs towards the low cost scenario" (TGVI/TGW Submission, p. 32).

TGVI states that there will be ten stream crossings of which three crossings will not have new MOT bridges and will thus require aerial crossings (Exhibit B2-2, BCUC IR-1 16).

Given the mountainous nature of the terrain and the MOT's observation concerning seismic activity, TGVI considers the possibility of a rupture of the pipeline as a result of seismic activity and concludes that it would be "extremely unlikely". The circumstance required for this would be dramatic failure of the land within which the pipe is buried or supported with the result of the pipe being sheared off. In such an event, automatic isolation valves would

minimize gas loss but gas flow would be interrupted. If the automatic closure occurred at the pipeline midpoint, then the system survival time would be 4 hours or longer under normal winter load without curtailment measures. However, if such an event occurred, the first step would be to curtail customer use to allow time to restore service through temporary bypass procedures (Exhibit B1-4, BCUC IR-1 54.3).

TGVI states the pipe will be laid between 0.75 to 1.2 metres below grade within the highway right-of-way and that the pipeline has been designed specifically to withstand known and probable rock fall events following geotechnical assessment (Exhibit B1-4, BCUC IR-1 54.5).

TGVI states that it has emergency response procedures in place (Exhibit B1-12, MEM IR-1 11.3), that it has qualified personnel to respond to problems on the proposed IP system in both Squamish and Whistler and that it could respond to an event in approximately 20 minutes.

TGVI states that pigging barrels for internal inspection of the pipeline will not be installed on the IP Pipeline, but that the design of the pipeline will allow for the possible installation of such facilities at a later date. TGVI notes that current magnetic flux leakage technology does not provide reliable results for such a low pressure and low flow pipeline (Exhibit B2-2, BCUC IR-1 9.3).

In the matter of project management, project safety and environmental practices, TGVI states that it will rely on TGI for project management and that it does not intend to generate a separate contract for these services (Exhibit B2-2, BCUC IR-1 13). It will instead rely on the existing shared services agreement for this work. Corporately it has a policy to use best practices in relation to environmental issues (Exhibit B1-12, MEM IR 10.4). TGVI also notes that TGI may provide construction services on the pipeline instead of using contractors where work is to be completed on short notice or where contractors are not available and that work for this type of service will be performed at TGI’s inter-company charge rates.

4.1.2 Construction Schedule

TGVI states that the project schedule for installing the IP Pipeline will have to coincide with road construction along Highway 99 and will be timed to occur after the road base is constructed, but before paving in order to minimize costs and disruption. The highway project schedule was provided by TGVI as follows:

Design Build #	Length	Bridges Start	Bridges Finish	Base Start	Base Finish	Paving Start	Paving Finish
DB 8	10.6 km	Jul 2007	Nov 2007	Jul 2008	Oct 2008	Oct 2008	Mar 2008
DB 12	8.9 km	Oct 2005	Mar 2008	Sep 2005	Nov 2008	Mar 2007	Nov 2007
DB 13	14.3 km	Mar 2007	Sept 2008	Sep 2005	Aug 2008	Nov 2008	Mar 2009

Source: Exhibit B2-1, p. 13

TGVI notes that the design work for section DB 12 is now underway and that TGVI has entered in to a memorandum of understanding with Peter Kiewit Sons Co., the design build contractor working under S2S for that section. In order to work to this schedule, TGVI has developed a piecemeal project schedule that spans the three year period. TGVI estimates that, under its schedule it will be necessary to build 5 km of IP Pipeline in 2006, 11 km in 2007 and 14 km in 2008, with the remaining 20 km in existing road areas to be managed throughout the three year period.

On the matter of coordination with S2S and the issue of liability for delay in the S2S schedule caused by TGVI: TGVI states it is understood that S2S is subject to penalties related to traffic delays beyond that allowed by MOT. Careful coordination, documentation, and corresponding agreements will be required for TGVI to avoid liability and the highway construction must, in both principle and practice, take precedence over the pipeline scheduling. One of the main steps in this regard is TGVI's plan to construct the pipeline over three years instead of the normal one year to provide the necessary scheduling flexibility. TGVI is proceeding with the coordination steps necessary to avoid liability as evidenced by the Memorandum of Understanding with Peter Kiewit Sons Co. (Exhibit B2-1, Appendix 2).

4.1.3 Permits and Licenses

TGVI states that in addition to the permits required by MOT, provincial and federal governmental agencies issuing permits for the project could include:

- Canadian Environmental Assessment Agency ("CEAA");
- Fisheries and Oceans Canada ("DFO");
- Transport Canada;
- Canadian Wildlife Services ("CWS");
- Oil and Gas Commission ("OGC");
- Environmental Assessment Office ("EAO"); and
- Ministry of Environment ("MOE").

However, it states that applications for permits from these agencies cannot be submitted until design is completed for the various components of the project. TGVI further states that preliminary discussions with the CEAA and the BC EAO have both concluded that the size, length and design of the pipeline would exclude it from any review by those agencies. It is TGVI's submission that the use of structures and directional drilling for river crossings will reduce the DFO permit requirements to Letters of Advice and that permit filings with Transport Canada under the Navigable Waters Protection Act and with the CWS are expected to be uncomplicated and minimal.

Municipal permits will be required from the RMOW and from the District of Squamish. The RMOW has endorsed the project and is therefore expected to issue the necessary permits to enable construction of the IP line within its roads. The District of Squamish has also been consulted, but there is no indication as to its support or rejection of the project (Exhibit B2-1, p. 24).

TGVI states that it has consulted with the Squamish and Lil'wat Nations, and includes a Letter of Intent from the Lil'wat Nation (Exhibit B2-1, Appendix 6). The Companies stated that they have reached an accommodation agreement with the Squamish Nation (Exhibit B1-27).

Counsel for the Lil'wat Nation informs the Commission that his client and the Companies have executed an accommodation agreement in which the Lil'wat Nation acknowledges that it has been adequately consulted in respect of the proposed pipeline, infrastructure and conversion projects, and that it is satisfied with the accommodation measures reached (Exhibit E-2, p. 1).

4.1.4 Funding

TGVI states that it proposes to finance its capital expenditure with 60 percent debt and 40 percent equity to maintain its capital structure. It states that the source of external financing would be Canadian banks or capital markets as required to maintain TGVI's appropriate capital structure. TGW states that it will finance the contribution as part of rate base under its approved capital structure, currently 65 percent debt and 35 percent equity. Initial funding would be through advances from the parent company (Exhibit B2-2, BCUC IR-1 25.1).

4.1.5 Capital Costs

TGVI provides estimates for the cost of the project using construction in the shoulder, the ditch and a cross-country route as representative of a low, base and high cost scenario. For comparison purposes they generated costs for each scenario using three different sources:

- in-house from historical contractor information and contractor discussions;
- a consultant hired in mid-2005, Integrated Pipeline Projects Inc.; and
- an independent third party contractor, Chinook Engineering.

TGVI provides a matrix table summarizing the results as follows:

Description	$2005 (millions)		
	Low	**Base**	**High**
MOT & Crown right-of-way	0.6	0.5	0.5
Materials	4.3	4.6	5.2
Construction (TGVI)	20.8	26.3	29.3
or,			
Construction (Chinook)	20.8	26.2	31.2
or,			
Construction (IPPI)	22.2	25.9	29.7
Project Services	1.7	2.2	2.4
Squamish M/R Station	0.3	0.3	0.3
Total IPPI Basis	29.1	33.6	38.1
Total Average Basis	28.2	33.8	38.5
Total Low/Average/Highest	27.7	33.8	39.7

(Exhibit B1-28, p. 25 corrected version)

The range of the estimates provided attests to the degree of uncertainty in costs related to this project. TGVI states that the cost outcome is heavily dependent on the approvals granted by the MOT and coordination with S2S (Exhibit B2-2, BCUC IR-1 31.1).

TGVI identifies one of the highest variable cost items as river and stream crossings (Exhibit B2-2, BCUC IR-1 8.4). The unit cost varies from $1.78 to $5.46 million, depending on whether bridge crossings, aerial crossings or directional drilled crossings are required.

Concerning blasting, rock shield and extra depth ditch, TGVI states that it made various allowances for blasting depending on alignment assumptions and estimate source and that estimates range from 3 km to 30 km of blasting. It states that the full potential range of such costs are within the contingency allowance and would have minimal impact on the project. IPPI identifies the potential risk associated with this item in its report (Exhibit B2-1, Appendix 4). There are also significant differences in costs for the Base Lay and Trench Rock and/or Scaling items in the estimates. Until final design work is completed, a more accurate range of costs cannot be determined.

4.1.6 Intervenors' Positions

The Intervenors do not question TGVI's ability to design, estimate, project manage, schedule and obtain the necessary permits for the IP Pipeline. Their major concerns relate to cost over-runs and the sharing of risk and are set out in Chapter 6.0.

4.1.7 Views of the Commission Panel

The Commission Panel is satisfied that TGVI has the necessary expertise to design, estimate, project manage, schedule and obtain the necessary permits for the IP Pipeline. The Commission Panel is also satisfied that TGVI and TGW, respectively, have the necessary capacity to finance the IP Pipeline and the contribution. So far as concerns cost over-runs, the Panel's views are set out in Chapter 6.0 of this Decision.

5.0 TERASEN GAS (WHISTLER) INC.

5.1 Conversion of Existing Propane System

5.1.1 Project Description

TGW states that the proposed conversion of the Whistler propane system to natural gas will involve decommissioning of existing plant facilities; purging and gasifying of the distribution system; upgrading of meters and regulators; appliance conversions; and building a regulating station (Exhibit B1-1, Appendix E).

The plan calls for the regulating station to be located in the Function Junction area and to be constructed for placement below grade either in the MOT right-of-way or on municipal land. It will be designed to regulate from 2,070 kPa (300 psig) to 550 kPa (80 psig), will be sized to the design peak flow of the Whistler distribution system and will be prefabricated off-site. If not permitted in the MOT right-of-way or municipal land an adjacent right-of-way will need to be acquired at a price estimated by TGW to be $2,000 (Exhibit B1-5, BCUC IR-1 20.4).

TGW proposes the distribution system conversion to be carried out by teams of 10-12 contract personnel beginning at the south end of the system and moving north in isolated sections, with oversight by TGI personnel as required. The Function Junction plant will be decommissioned as soon as all the distribution system south of that plant is converted. Similarly, the Nesters plant is to be decommissioned as soon as everything south of that plant is converted. Once the Nesters plant is decommissioned, customers on the distribution system to the north of that plant will be supplied from temporary propane plant facilities until all sections have been converted. Crews are to carry out purging, leak testing and appliance conversion in each of the isolated sections, before re-gasifying that section with natural gas. Each section will be sized to enable all necessary work to be completed in one day (Exhibit B1-2, Appendix D).

As part of the conversion process, the distribution system pressure is to be increased from the current 140 kPa (20 psig) maximum operating pressure to 550 kPa (80 psig). The pressure increase is possible due to a combination of the use of pipe designed for the higher operating pressure and the properties of natural gas that, unlike propane, does not pose a risk of condensing to liquid within the system. The increase in the range of operating pressure for the distribution system more than offsets the lower energy content of natural gas, as compared to propane, and will provide additional service capacity within the distribution system to handle future growth. Further, TGW states that, as a result of the age and general condition of the distribution system, only minor system upgrades are anticipated. TGW states that it has not conducted any specific studies to determine the condition of the piping and is largely depending on its experience from past system work together with that of previous projects as its basis for assessing upgrade requirements under this project (Exhibit B1-5, BCUC IR-1 21).

TGW states that most appliances in the Whistler system are fairly new and that it has not budgeted for the replacement of any appliances that cannot be converted to natural gas. TGW also proposes that, where appliances are rendered obsolete due to an inability to be converted to natural gas, the replacement costs for such appliances are to be borne by the customer (Exhibit B1-5, BCUC IR-1 22.2 and Exhibit B1-15, BCUC IR-2 58.1).

5.1.2 Schedule

TGW states that the schedule for the conversion/upgrade work on the distribution system will begin in August 2008 by the target in service date for the conversion of October 2008, in time for the beginning of the heavy winter heating season. The work is estimated to involve 2,102 man days to complete. TGW's estimated daily cost of each team is $6,000 and it anticipates as many as 5 or 6 teams working at the peak (Exhibit B1-15, BCUC IR-1 58.2). TGW states that the decommissioning of the plant and rail facilities, the equipment salvage and the land disposal will follow in 2009 (Exhibit B1-1, p. 17).

5.1.3 Cost Estimate

The cost estimates provided by TGW in its Application to complete the conversion work are mostly static across the range of future load growth cases. However, the High Case estimate is greater by $114,000 due to an increase in the contingency allowance. The summary of costs provided for the various components is as follows:

Table 5.4.1.1: Capital Cost – IP/DP Station, DP Conversion, Customer Upgrades

Description	Costs (000s 2005$)		
	Low Case	**Base Case**	**High Case**
IP/DP Station	269	269	269
DP Conversion	337	337	337
Meter and Regulator Upgrades	457	457	457
Appliance Retrofits	3,299	3,299	3,299
Planning and Project Management	350	350	350
Contingency	476	476	590
Total	5,188	5,188	5,302

(Exhibit B1-2, p. 19)

TGW submits that the most significant costs in their estimates are for appliance retrofits. Their estimates are developed from a review of the TGW customer records, an assessment of labour rates in consultation with the contractor that performed the Victoria upgrade work, its own estimate of conversion labour and material costs and a survey of per diem expenses from various sources (Exhibit B1-5, BCUC IR-1 9.2). TGW also notes that its development costs will amount to $750,000 (Exhibit B1-2, p. 22).

The RMOW confirms that it will take the lead to seek funding to offset costs for conversion of customer appliances with other levels of government (Exhibit E-1, p. 2). However, TGW is not able to identify any specific funding available and describes the offset funding as uncertain (Exhibit B1-5, BCUC IR-1 8.2).

Funding

TGW states that it proposes to fund the conversion according to its capital structure of 65 percent debt and 35 percent equity. Initial funding would be by way of advances from its parent company.

5.1.4 Intervenors' Positions

The Intervenors do not question TGW's ability to schedule and carry out the conversion of its propane system from propane to natural gas. Their major concerns relate to cost over-runs and the sharing of risk and are set out in Chapter 6.0.

5.1.5 Views of the Commission Panel

The Commission Panel is satisfied that TGW has the necessary expertise to schedule and carry out and the capacity to finance, the conversion of its propane system from propane to natural gas.

5.2 Discontinuation of Propane Distribution Service

5.2.1 TGW's Application

TGW operates as a regulated utility under the UCA. It has been granted the exclusive right to deliver propane to customers within the RMOW in return for an opportunity to earn a return on its investment in facilities. The Company has an obligation to serve which means that it is required to provide propane delivery service to customers that request it as long as it is technically and economically feasible to do so. Pursuant to Section 41 of the Act, TGW must request approval to cease the operation of propane distribution. The Company is requesting such approval in its submission (TGVI/TGW Submission, p. 2).

TGW states "…the original CPCN that was granted for the utility service in Whistler, while it says it's granted for gas service, it certainly talks in terms of propane service. The preamble to the order indicates that an application was made for propane service" (T2: 38).

5.2.2 Intervenors' Positions

No Intervenor commented on this issue.

5.2.3 Commission Panel Determination

The Commission Panel grants permission to TGW to discontinue propane distribution services when natural gas service is fully in place.

5.3 Amortization of Propane Assets and Study Costs

5.3.1 TGW's Application

When natural gas service commences in Whistler in October 2008, TGW states that the existing propane plant facilities for offloading, storage and distribution will no longer be used and useful. TGW seeks approval to transfer the net book value of the facilities less salvage value of the propane tanks and net proceeds from the sale of the land to a rate base deferral account for recovery in rates.

TGW states the net book value of the propane assets transferred to the deferral account is estimated to lie between $4.196 million and $4.374 million. The difference between Base Case and High Case is due to the estimated land remediation costs and the propane tank salvage value.

Net Book Value of Propane Assets		
	Base Case ($000's)	**High Case ($000's)**
Book Value – Land	$899	$899
Land Remediation and Disposal Costs	400	461
Proceeds from sale and land for net of Capital Gains Tax	(1,824)	(1,824)
Net Proceeds from Land	(525)	(464)
Propane Facilities Cost	6,979	6,979
Accumulated Depreciation	(1,947)	(1,947)
Propane Tank Salvage	(311)	(194)
	4,721	4,838
Total Undepreciated Propane Plant	$4,196	$4,376

(Exhibit B1-2, pp. 20-21)

The Application proposes to amortize the net book value of the propane assets over a 20-year period (5 percent straight line amortization rate) commencing in 2009. The Application states that the 20-year amortization period has been adopted on the basis that it approximates the remaining life of the facilities (Exhibit B1-2, p. 27).

TGW forecasts the annual amortization expense to be between $274,000 and $283,000.

5.3.2 Intervenors' Positions

The Intervenors do not comment on TGW's proposal.

5.3.3 Commission Panel Determinations

The Panel notes that it has allowed utilities subject to its jurisdiction to include in rate base the net book value of plant that is no longer used and useful and permit its amortization. **The Panel accepts TGW's proposal.**

5.4 Amortization of Study Costs

5.4.1 TGW's Application

In this Application, TGW is seeking to recover pipeline study costs incurred prior to 2004 and currently recorded in a non-rate base deferral account. The proposed amortization period is 20 years, to conform with the amortization period of the propane assets. TGW says the bulk of the expenditures were incurred in 1997 and 1998 in respect of the original CPCN application. Since that time there have been minor additions as well as interest. The amount is net of tax.

TGW forecasts that the balance at the end of 2008 will be $1,287,013.

5.4.2 Intervenors' Positions

The Intervenors do not comment on TGW's proposal.

5.4.3 Commission Panel Determination

The Panel notes that Commission Orders No. G-35-00 and G-74-01 also contemplated that "recovery of the balance of this account will be through amortization of the deferral account at a later date, or following application, during a Certificate of Public Convenience and Necessity process". **The Commission Panel finds that the amount be included in rate base as requested and amortized over the remaining life of the propane assets as of January 1st of the year following the commencement of natural gas service.**

6.0 RISK SHARING ARRANGEMENT

6.1 TGW's Position

TGVI states that any "capital cost variance" will result in an adjustment to the capital contribution to be paid by TGW to TGVI. As the capital contribution from TGW will be determined once the pipeline is completed, TGVI's customers are protected from capital cost risk (Exhibit B-2, pp. 32, 34). So far as TGW's cost of conversion is concerned, the Application is silent on the matter of "capital cost variances".

Both companies respond to an interrogatory concerning the allocation of risk of cost over-runs as follows:

> TGVI has put forward a high cost estimate based on the best available information at the time of the application. Significant cost items included in this estimate, which are largely out of the control of the Company, are costs related to bridge and stream crossings and pipeline placement within the highways Right of Way. The decisions regarding these items, which will drive capital costs, rest with the Ministry of Transport. MOT is not in a position to finalize its decisions regarding these issues at this time, resulting in the uncertainty in the capital cost estimates. The Companies will continue to work closely with the MOT. TGW has put forward its capital cost estimates for the distribution system conversion based on the best available information at the time of the application.
>
> TGVI and TGW are prepared to accept a risk sharing arrangement for aggregate cost over-runs beyond the total of the capital costs of the TGW distribution project, plus the high cost estimate of the pipeline but excluding all capital costs that are dependant on MOT approvals, providing there is a benefit sharing arrangement for cost savings as compared to this estimate. TGVI appreciates that all stakeholders benefit if the project is delivered at the lowest possible cost but doesn't believe its Commission allowed return adequately compensates it for taking on project cost escalation beyond its reasonable control on CPCN approved projects. The net effect of this position is that all cost savings resulting from favourable cooperative efforts between the Companies and the MOT will flow to the benefit of customers.
>
> (Exhibit B2-2, BCUC IR-1 9.1)

6.2 Intervenor Submissions

The BC Old Age Pensioners Organization *et al*. ("BCOAPO") submits that because the ratepayer is absorbing contract demand forecast risk, annual throughput forecast risk, weather-related risk, and some or all cost over-runs/repair cost risk, that TGVI and TGW are not entitled to their normal return on equity ("ROE") that would be associated with investment in this project. If the Commission accepts the cost allocation and tolling methodologies proposed, BCOAPO submits that it would be appropriate to deem the project's prudently incurred capital costs as being supported by 100 percent debt (BCOAPO Submission, p. 6). It is understood that BCOAPO would have the Companies' shareholders absorb costs that were not "prudently incurred".

The CEC submits that the ROE to be enjoyed by shareholders is a result of their investment in the Companies and in future return on equity resulting from this increase to the rate base of the respective utilities is more than ample to reward the shareholders for the risks undertaken in pursuing this initiative. There is no justification for providing further reward to shareholder in event that the Companies effectively do their job of delivering the project on time and on budget. That is a reasonable expectation held by customers and one that should be expected by the Commission and the Companies. To accept the high cost of $43,765,000 as proposed by the Companies and then reward the Companies for coming in under the high costs is unfair and unreasonable to customers. The shareholders receive their return on equity. That is the fair reward for their investment (CEC Submission, pp. 8-9).

The CEC submits that not only the capital costs forecast for the Squamish to Whistler pipeline application but also the conversion costs in relation to the system at Whistler should be subject to a risk sharing formula whereby the shareholder will be at risk should the forecasts of the Companies not prove accurate (CEC Submission, p. 9).

VIGJV submits that all risk associated with the Whistler Facilities should be borne solely by TGVI's shareholder. TGVI and TGW are affiliated companies. The project was conceived and is championed by management appointed by TGVI's ultimate controlling shareholder. That

management team is responsible for procuring all engineering studies and cost forecasts. The TGVI management team will control and oversee the construction of the Whistler Facilities. In short, every aspect of the project is within the control of TGVI's management and, ultimately, its controlling shareholder.

TGVI's rates already include a return on investment reflective of risk in its business. If the Commission allows the Whistler Facilities to be constructed on terms that could, even in remote circumstances, impact negatively on any of TGVI's existing customers, TGVI will receive compensation for a risk it will have effectively passed on to at least some classes of its existing customers. VIGJV submits that such an outcome would be patently unjust and unfair (VIGJV Submission, p. 2).

The RMOW submits that the CPCN submission includes detailed construction cost estimates and the RMOW believes the information provided by the Companies demonstrates the project provides an economic alternative to maintaining the propane system. The RMOW understands there is a level of uncertainty due to escalating construction costs. In order to manage this uncertainty, the potential for a capital cost risk sharing mechanism is proposed for consideration.

Given the escalating construction costs noted above, the RMOW would support a capital cost risk sharing mechanism to provide an incentive for TGVI to minimize expenses and thereby limit the community's exposure to cost over-runs associated with this project.

The RMOW would also support cost risk sharing mechanism for the conversion program to provide TGW with incentives to manage the conversion program in the most efficient manner possible (RMOW Submission, p. 2).

6.3 The Companies' Response

The Companies submit any cost sharing mechanism must provide a balance of fairness, prudency and incentives to manage costs that align customer and company interest. Given the uncertainty in the cost scenarios related to the future outcome of approvals with MOT and the highway construction project, the Companies indicate that they would be prepared to consider a cost risk sharing mechanism based on the aggregate direct costs of both the Whistler conversion costs and the IP Pipeline under the High cost scenario, provided that in return for taking this risk, there is also some sharing of cost savings if the projects can be delivered at lower costs. The difficulty in proposing such a mechanism with more definition has been in determining how to treat the uncertainty related to MOT approvals and construction coordination benefits. The Companies therefore propose a simplified mechanism as described below.

If considered appropriate by the Commission, in order to mitigate the risk to TGW's customers, to provide incentive to the Companies to effectively and efficiently manage project costs, and in response to the Intervenors submissions, the Companies are prepared to accept a cost/benefit risk sharing mechanism with risk and sharing in savings based on a range of plus and minus 10 percent on the aggregate base cost estimate of $41.4 million (being IP Pipeline, Whistler Conversion and Development Costs before AFUDC). This is a narrower range than the plus 16 percent and minus 15 percent range discussed in the applications, and therefore a further incentive mechanism would apply on costs within this range. The cost/benefit risk sharing would be structured as following:

- For any costs above $45.6 million (110 percent of the base cost estimate), there will be 60/40 sharing between the customers and TGW. In other words, only 60 percent of aggregate direct costs in excess of $45.6 million will be entered into the TGW rate base, and TGW would not earn on the remaining 40 percent of the costs.
- For savings below $37.7 million (90 percent of the base cost scenario) there will be a 60/40 sharing of the benefits between customers and TGW. In other words, 60 percent of the savings below $37.7 million would be realized by customer and TGW would earn on a rate base amount equal to 40 percent of the savings.

- For costs savings below $45.6 million, but above $37.3 million, there will be a 80/20 sharing of the benefits between customer and TGW. In other words, 80 percent of the first $8.3 million in costs savings below the $45.6 million would be realized by the customer, and TGW would earn on a rate base amount equal to 20 percent of the savings.

  (TGW/TGVI Reply Submission, pp. 25-26)

6.4 Views of the Commission Panel

The Commission Panel notes that while the Companies propose that such a cost sharing mechanism is similar that approved by the Commission in the Southern Crossing Pipeline ("SCP") hearing, it differs significantly in two ways. First, while the proposal of TGVI and TGW provides a bonus to rate base for any reduction below 110 percent of the Base Capital Estimate, the SCP plan did not provide any incentive payment unless cost savings well below the estimate were achieved. Second, the SCP incentive provided an absolute collar as opposed to a sharing mechanism, i.e. no costs were to be allowed in to rate base in excess of 110 percent of the estimate and the company was allowed the full amount in to rate base for cost savings below 90 percent. At the time of the SCP hearing firm quotations for most of the construction work were available, most of the right-of-ways were secured, alignments were known and there was a much shorter construction schedule for the project. There was therefore a relatively high level of ability for the company to control project costs and a higher level of cost certainty with respect to that project in comparison to the project currently being proposed.

The Commission Panel shares the concerns expressed by the RMOW and CEC over the uncertainty of costs related to this project, in light of the relatively narrow levelized price advantage that delivered natural gas is forecast to offer over propane. The Commission Panel therefore feels that a risk sharing mechanism in this instance is appropriate.

TGW expresses confidence in both its knowledge of the scope of work and the estimated cost of the various components for conversion of the system from propane to natural gas. As a result, the Commission Panel expects that TGW should be able to manage costs and complete this work within the $5.189 million estimate provided (Base Case, $2005, inclusive of a 15 percent contingency) and the $0.750 million estimate for Development costs. Therefore, like

the Decision for the SCP, it finds that costs allowed into rate base for this work and development should be capped at 110 percent of the estimated Base Case cost, adjusting for the average annual rate of inflation provided by the Consumer Price Index published by Statistics Canada and before taking into account any funding received from the various levels of government. As an incentive, if this work and development are completed at less than 90 percent of the estimated Base Case cost in $2008, the savings will accrue to the benefit of TGW. Similarly, the Commission Panel finds that the same collaring mechanism should be applied to TGW with respect to the estimate of $330,000 for the meter/regulating station proposed for Squamish.

With respect to the IP Pipeline, the Commission Panel expects TGVI to make every effort at coordination of work with the MOT and to choose the lowest cost method of crossing each of the 10 named streams. However, TGVI ultimately has little control over whether it will be possible to utilize bridges in order to minimize such costs. Further, TGVI identified that geotechnical considerations may preclude the option of directionally drilling certain of the stream crossings even though TGVI prefers that method to aerial crossings due to lower long term maintenance costs (Exhibit B2-1, BCUC IR-1 8.3). The Commission Panel therefore finds no value in providing an incentive mechanism related to stream crossings and takes the view that the estimated costs for the stream crossing should be removed from the IP Pipeline cost estimates for the purposes of determining incentives related to the proposed IP Pipeline.

Final alignment for the IP Pipeline is a major variable in the cost of the project. However, since alignments cannot yet be established and since TGVI has very little control over the decision on alignment, the incentives for this work should be sensitive to the treatment of risk for the different potential alignment outcomes. In addition, while the Commission Panel supports the general principles proposed by TGVI in relation to its incentive proposal for the IP Pipeline, it does not agree that a bonus to rate base should be provided between 90 percent and 110 percent of the estimated cost, particularly considering the level of the contingencies already embedded in the cost estimates. This part of the Companies' proposal is not consistent with the expectation that a risk sharing arrangement should be symmetrical. The Commission Panel therefore establishes a risk sharing arrangement for the IP Pipeline as follows:

- Cost estimates related to the Squamish Meter/Regulating station and Named Stream Crossings (including related contingency) are to be removed from the cost estimates provided by TGVI in Exhibit B2-1, Appendix 5 and Adjusted Average cost estimates for the IP Pipeline are to be established for each of the Low, Base and High case scenarios.
- Upon completion of the work a determination will be made as to what percentage of the IP Pipeline is in the shoulder, the ditch or an off-highway alignment and those percentages will be applied to each of the Adjusted Average Low, Base and High estimates, respectively, to identify an Overall As Built Estimated Incentive Base Cost for the project.
- All reductions and increases in the cost of the project (adjusted for inflation, but excluding AFUDC) between 90 percent and 110 percent of the Overall As Built Estimated Incentive Base Cost will fall in the deadband and be for the account of the customer.
- All reductions and increases in the cost of the project (adjusted for inflation but excluding AFUDC) below 90 percent or above 110 percent of the Overall As Built Estimated Incentive Base Cost will be shared 50/50 between the customer and the shareholder of TGW.

The Commission Panel is prepared to grant the Companies the CPCNs requested in the Applications on the condition that, within 10 business days of the date of this Decision, they provide in writing:

- confirmation that the foregoing a risk sharing arrangement is acceptable to them;
- estimates of the Adjusted Average cost estimates for the IP Pipeline under the three scenarios, plus the percentages of shoulder, ditch and off-highway in each estimate; and
- amended versions of the TSA and Contribution Agreement, in compliance with the Panel's decision in Chapter 7.0 of this Decision.

7.0 TARIFF DESIGN

7.1 Transportation Service Agreement

7.1.1 General

The Companies file an executed version of the TSA among themselves. The term of the TSA is 15 years commencing on the January 1st following the day TGW takes gas at its delivery point. The TSA is automatically renewed from year to year. Termination requires one year's notice and the payment by TGW of the net book value of the Whistler Facilities less the unamortized portion of its contribution. The toll to be paid is a unit toll, which for each contract year will be based on TGVI's forecast allocation of its fixed costs and TGW's forecast annual requirement for gas (Exhibit B1-33, pp. 4-13).

7.2 Unit Tolls

7.2.1 TGVI's Position

Pursuant to Article 5 of the TSA, TGW will make monthly payments to TGVI based on an amount obtained by multiplying a Unit Toll by the total quantity of gas delivered to TGW during that period. The Unit Toll is based on TGVI's forecast of fixed costs for transmission service allocated to TGW divided by the TGW's forecast Annual Requirement for that Contract Year. TGVI will allocate costs to TGW on the basis of TGW's Contract Demand relative to the total demand on its system, and therefore TGW's share of transmission costs will also depend on TGVI's forecast of other core market and firm industrial loads on its system (TGW/TGVI Submission, p. 35).

The Companies justify the use of a Unit Toll on the basis that it was a similar approach to the tolling for core market customers on TGVI system. The use of a Unit Toll for firm and interruptible service is also consistent with the terms of the transportation service agreement between TGS and TGVI although the calculation of the unit toll under the TGS contract is

different than that proposed under the TGW TSA (Exhibit B1.5, BCUC IR-1 254.2).

7.2.2 Intervenors' Positions

BC Hydro, BCOAPO and the VIGJV argue that there is no reasonable basis for the use of a Unit Toll for firm transportation service to TGW (as compared to a Demand Charge or Demand Toll), and that a Unit Toll places unnecessary risk on TGVI and its customers (BC Hydro Submission, pp. 11-13; BCOAPO Submission, p. 5; VIGJV Submission, p. 4).

BCOAPO suggests there is a risk to TGVI customers that TGW will over-forecast its annual requirements and thereby establish a unit toll that is too low, leading to under-recovery of revenues by TGVI (BCOAPO Submission, p. 4).

7.2.3 The Companies' Response

The Companies reply that this latter suggestion appears to be predicated on the assumption that the annual forecasting process will in some manner be biased in favour of TGW. The annual forecasting process for the TGW demand will be part of future TGW and TGVI revenue requirement applications, and subject to the Commission's oversight. Beyond this, there would be no value in developing forecasts that favour either Company, particularly when the availability of firm transportation service to TGW will be limited by the demand established in the annual forecasting process.

Nevertheless, TGW submits that if the Commission considers it appropriate, it is prepared to accept an alternative under which TGW would pay the revenue due to TGVI as a monthly demand charge (or demand toll) based on its annual Contract Demand, instead of paying the revenue to TGVI through a Unit Toll. Under this alternate scenario, TGW's Contract Demand in the TGW TSA would continue to be set each year based on the forecast of TGW's maximum daily requirement or peak day demand. The Companies observe that such a change will protect TGVI from fluctuations in revenues from TGW resulting from weather variations (TGW/TGVI Reply Submission, p. 16).

7.2.4 Views of the Commission Panel

The Commission Panel considers a demand toll to be more appropriate and requires that, as a condition precedent to the issue of a CPCN, the Companies amend the TSA accordingly, with the Contract Demand being based on TGW's forecast of its maximum daily transportation requirement, as set out in its latest accepted Resource Plan. In this way the risks and rewards of forecasting demand will be appropriately allocated to TGW and its customers rather than TGVI and its customers.

The Commission Panel also requires that, as a condition precedent to the issue of a CPCN the Companies delete the part of Article 5.1 that deals with methodology and replace it with the words "Tolls payable by TGW will be as approved by the Commission from time to time." In this way, the tolls payable by TGW under the TSA will be the rates that the Commission establishes as the result of applicable rate decisions.

7.3 Cost Allocation and Rate Design

7.3.1 TGVI's Position

TGVI states that Article 11.01 of the December 14, 1995 Transportation Service Agreement between TGVI and the Vancouver Island Gas Joint Venture ("JV TSA") provides:

> Pacific Coast [now TGVI] covenants with and in favour of Shipper that Pacific Coast:
>
> (b) shall, in respect of the tolls to be charged to any new Third Party Shipper of gas through the Pacific Coast System, apply to the BCUC for approval of tolls which are determined in accordance with the full fixed-variable cost of service methodology and which, in the case of the mainline sections of the Pacific Coast System, are determined on a rolled-in basis as opposed to an incremental basis

TGVI states that it is contractually bound to comply with the provisions of Article 11.01(b) of the JV TSA and has done so. It reminds the Commission that Section 3.2 of the Special Direction required the Commission to approve the JV TSA, and the Commission has done so (Exhibit B2-2, BCUC IR-1 5.2, p. 6).

So far as the method of cost allocation, TGVI states:

> TGVI will allocate the costs; however, as stated in Subsection 5.2 the methodology and resultant toll will be subject to BCUC approval. The allocation methodology will be the BCUC approved methodology for the allocation of the TGVI high pressure transmission system (HPTS) cost of service. The costs of the Whistler pipeline net of TGW's contribution would be added to the existing HPTS cost which is allocated to all HPTS customers. The amount of the TGW contribution has been set at an amount, based on the forecast demand, that would leave all other TGVI customers 'harmless' as if the Whistler pipeline had not been built.
>
> TGW portion of the allocated costs would be proportional to their peak demand relative to the total peak demand used to allocate the HPTS and Whistler pipeline costs.
>
> The costs that would be included would be those the Commission approves in the annual revenue requirement for allocation to the HPTS customers. The TGVI distribution system costs, other than those specifically related to the Whistler Pipeline, would not be allocated to TGW just as they are not allocated to BC Hydro, Joint Venture and to Terasen Gas (Squamish) Inc. In the financial analysis it was assumed TGW would be allocated a portion of the RDDA amortization cost (Exhibit B1-5, BCUC IR-1 28.2, p. 103).

TGVI states that the RDDA costs allocated to TGW are as follows:

2008	$110,000
2009	$124,000
2010	$ 6,000

(Exhibit B1-20, p. 13)

TGW forecasts that the RDDA will be extinguished by the end of 2009 if BC Hydro continues to take transportation service after 2007 (Exhibit B1-25, p. 4).

The Companies state in response to why their toll design for TGW differs from the 2003 Rate Design Decision, that:

> The primary distinction between the tolls prescribed TGW and the toll for FT and IT services in the 2003 Decision is that TGW is a core market load whereas the referenced quote from the 2003 Decision is referring to industrial load and more specifically to the BC Hydro contract for the Island Cogeneration Project.
>
> The significant differences between the proposed TGW tolls and the transportation service rates approved in the 2003 Decision pertain to the load characteristics and regulatory construct that accompany a core market load. Core market load typically has a much lower load factor than industrial load and is dependent on the utility service for an indefinite period of time going forward. An industrial customer, on the other hand, typically takes utility service for a contractually prescribed period of time and can leave the system at the end of the contract without penalty [Exhibit B1-24, BC Hydro IR-2 - 1 a) and b)].

7.3.2 Intervenors' Positions

BC Hydro submits that it is a major shipper of natural gas on the existing transmission system, and that although its existing contract arrangements for transmission service on TGVI end December 31, 2007, subject to an extension provision to December 31, 2008, it has an obligation to supply and transport natural gas to the Island Cogeneration Project ("ICP"), which terminates in 2022. Therefore, it states that it has an on-going, long-term need to have appropriate gas transmission arrangements with TGVI, which will be settled at a future date.

BC Hydro submits that Commission Order No. G-43-03 and the accompanying 2003 Rate Design Decision set out the rate designs for TGVI's core market ("TGVI Core") and for firm and interruptible services for new transmission customers.

BC Hydro submits that if the Commission determines that the subject applications should be approved, the Commission should have regard to the following comments or conditions:

(i) The rate design for the Terasen Gas (Whistler) Inc. firm and interruptible transmission service should be in accordance with the Commission's approved transmission rate design established in the 2003 Decision (the "Approved Transmission Rate Design"). TGVI's proposed rate design for TGW is not in accordance with the Approved Transmission Rate Design. Specifically, the proposed rate design does not use a demand charge, a revenue to cost ("R/C") ratio of 1.25 or seasonal rates for interruptible service; and

(ii) TGVI proposes to include a portion of the capital costs of the Intermediate Pressure Pipeline in TGVI's rate base. The portion is dependent on estimated revenue from TGW. Using the Approved Transmission Rate Design, that revenue will be higher due to the Commission's requirement for a R/C ratio of 1.25. The additional revenue resulting from the R/C ratio of 1.25 should not be included in the calculation of the portion of the IP Pipeline capital cost that is added to TGVI's rate base. Instead, it should contribute to recovery of the Revenue Deficiency Deferral Account ("RDDA") based on the Commission's determination in the 2003 Decision that TGVI has financial and timing constraints.

(BC Hydro Submission, p. 1)

BC Hydro rejects the Companies rationale for proposing different tolls from those established in the 2003 Decision. It states that neither Load Factor; duration of load; nor a penalty for leaving the system was a rate design criterion in the 2003 Rate Design Decision.

BC Hydro cites subsections 59(1) and (2) of the Act which provides:

59 (1) A public utility must not make, demand or receive

(a) an unjust, unreasonable, unduly discriminatory or unduly preferential rate for a service provided by it in British Columbia, or

(b) a rate that otherwise contravenes this Act, the regulations, orders of the commission or any other law.

(2) A public utility must not

(a) as to rate or service, subject any person or locality, or a particular description of traffic, to an undue prejudice or disadvantage, or

(b) extend to any person a form of agreement, a rule or a facility or privilege, unless the agreement, rule, facility or privilege is regularly and uniformly extended to all persons under substantially similar circumstances and conditions for service of the same description.

(Utilities Commission Act, R.S.B.C. 1996, Chap. 473)

BC Hydro submits that TGVI must not make, demand or receive an unduly discriminatory or unduly preferential rate for service provided by it, or a rate that otherwise contravenes orders of the Commission. The Approved Transmission Rate Design must be applied to TGW.

In summary, the Commission should comply with the 2003 Rate Design Decision and apply to TGW the Approved Transmission Rate Design. The circumstances that gave rise to the Approved Transmission Rate Design in 2003 still exist; namely, the financial and timing constraints of TGVI. TGVI has not applied for a new rate design since the 2003 Rate Design Decision. If TGVI seeks a new rate design for transmission services to new shippers, including TGW and BC Hydro, TGVI must make a rate case application and all interested parties must have an opportunity to participate (BC Hydro Submission, pp. 13-14).

The VIGJV submits that a critical feature of TGVI's Application and proposed tolling methodology is its treatment of TGW as though it was one existing distribution system for customers. VIGJV submits that there is no basis for treating TGW as part of TGVI's core distribution market load. TGW should be treated as what it is, namely a separate transmission shipper, and its tolls should be determined in the same manner as any other third party transmission shipper (VIGJV Submission, p. 6).

The VIGJV submits that TGW is a "Third Party Shipper" as defined by the JV TSA and that under Section 11.01(c) of the JV TSA TGVI must operate its transmission system on a non-discriminatory basis in respect of gas to be transported and delivered to the "Shipper" [i.e. VIGJV] and "Third Party Shippers". The JV TSA defines a "Third Party Shipper" to mean "any party other than Shipper [i.e. VIGJV], Pacific Coast, Centra Gas British Columbia Inc., or their respective successors" [i.e. together now TGVI]. Under this definition BC Hydro is a "Third Party Shipper" and so too is TGW. Accordingly, TGVI is contractually bound to treat BC Hydro and TGW as "Third Party Shippers" in a non-discriminatory way, both with respect to the tolls to be charged (section 11.01(b)) and generally in the way in which it provides service (section 11.01(c)). VIGJV submits that TGVI is in breach of its contractual commitment by giving preferential treatment to TGW by pretending that TGW is exactly the same as one of its core distribution system customers (VIGJV Submission, p. 9).

VIGJV submits that there is no justification to permit or require the results deemed appropriate in the unique circumstances that governed rate design for TGVI's core distribution customers to be flowed through to benefit TGW, a new shipper. The imperatives of the Special Direction do not apply to TGW. The circumstances of TGW's core market distribution customers are not the same as those of TGVI. TGW is a shipper and not a core market distribution customer. The market conditions and the history of the two utilities are different. TGW should be allocated a full share of costs in the same manner as any new Third Party Shipper such as was the case with BC Hydro. Not only does TGVI have a contractual commitment to treat TGW in the same manner as it treated BC Hydro, but good regulatory practice and rate design principles require fair and non-discriminatory treatment for all persons in the same class (VIGJV Submission, p. 9).

7.3.3 The Companies' Response

The Companies respond that BC Hydro and the VIGJV fail to recognize both TGW's different circumstances and the consequences that would result from the imposition of such tolls. They remind the Commission of TGW's 30 percent load factor and of the reasonable expectation that TGW will require transportation service for the life of the pipeline.

The Companies disagree with the thesis that the 2003 Rate Design Decision established transportation tolls that must be applied to all customers that make use of TGVI's transmission facilities, including TGW.

The Companies review the 2003 Rate Design Decision and reach differing conclusions. They argue that the tolls that were established by the 2003 Decision related to the specific circumstances of BC Hydro and its supply of natural gas to the ICP. That the tolls were intended to be the tolls of BC Hydro to supply the ICP is also evident from the last sentence of the Commission's determinations (page 41 of the Decision) found immediately after the last bulleted quote in paragraph 10 (the top of page 4) of the BC Hydro Submission:

> For the interim period between the Commercial Operation Date ("COD") of April 12, 2002 and December 31, 2002, the Commission approves the interim rate as permanent (TGW/TGVI Reply Submission, p. 9).

TGVI and TGW do not dispute that Centra Rate Design Decision refers to setting rates for "current and prospective customers", but the Companies submit that those words must be interpreted in the context of the Decision as a whole. The Companies submit that the transmission rates established by the Commission relate specifically to BC Hydro's supply of gas to the ICP generating facility, and more generally to future industrial customers whose characteristics are similar to those of BC Hydro. The 2003 Rate Design Decision does not preclude the Commission from determining the appropriate rates for any new customer. Since the characteristics of TGW as a customer are markedly different from BC Hydro, there is no legal or regulatory basis for the Commission to determine that the appropriate rates for TGW must be the same as those of BC Hydro. The Companies submit that it is in this proceeding that the appropriate rates for TGW (as a customer of TGVI) should be determined, and that determination should take into account the characteristics of TGW (TGW/TGVI Reply Submission, pp. 9-10).

The Companies cite the Commission's Decision dated August 29, 2005 as further evidence that the Commission has recognized differences among the customers as a basis for different terms and conditions of service and rates. In particular, they cite Commission Order No. G-79-05 which, inter alia, exempted three customers from having to adopt Stepped Rates since they distributed all or a significant portion of their load to others (TGW/TGVI Reply Submission, p. 10).

7.3.4 Views of the Commission Panel

The Commission Panel finds that TGW is a shipper on the TGVI system. TGW is not part of TGVI's core market. The evidence is clear. TGVI and TGW are separate corporate entities and the Commission cannot treat them as though they were one entity with one core market.

The Commission Panel finds TGVI's allocation of costs to TGW to be appropriate. However, the Commission Panel is not persuaded that, from the perspective of TGVI and its ratepayers, that the service to TGW is sufficiently different from that provided to other transmission customers that the rates for TGW should be different from the rates established by the Commission in its 2003 Rate Design Decision for transmission service customers. **The Panel finds the proposed revenue to cost ratio of 1:1 to be discriminatory and finds the revenue to cost ratio applicable to other shippers on the TGVI system (namely, BC Hydro) of 1.25:1 to be appropriate.**

The Commission Panel recognizes that rates for TGW that are based on such a revenue to cost ratio will provide funds in the years 2008 and 2009 to amortize the balance in the RDDA and that amortization will be accelerated. The Panel recognizes that once the RDDA is extinguished it may well be appropriate to revisit TGVI's Approved Transmission Rate Design.

The Panel further notes that applying the 1.25:1 ratio increases the cost of gas delivered at Whistler by $0.77 per GJ. If one assumes that the higher rate applies for two years, is levelized over 15 years and discounted at 6 percent, this adds 12.5 cents to the levelized cost of gas delivered at Whistler.

7.4 Interruptible Tolls

7.4.1 General

Article 4.4 of the executed TSA obliges TGVI to provide TGW with interruptible transmission service for that quantity of gas in excess of TGW's contract demand. The Companies contemplate that the Unit Toll established pursuant to Section 5.3 of the proposed TSA would apply to both firm and interruptible service. This is consistent with the tolling for TGVI's other distribution company customer, TGS where the Unit Toll applies to both firm and interruptible volumes. It is also consistent with the effective transport component included in the tariffs that apply to TGVI's own core customers (Exhibit B2-2; p. 8, BCUC IR-1 6.2).

7.4.2 Intervenors' Positions

BC Hydro points out that if TGW were subject to a demand charge, its IT rate would be much lower and submits that "there is no justification for the Approved Transmission Rate Design" not being applied (BC Hydro Submission, p. 13).

7.4.3 The Companies' Response

In Reply, the Companies address the likelihood of TGW requiring interruptible service for even one day of the year as "very low", and one which would require a record cold day event to occur (TGW/TGVI Reply Submission, p. 16).

Having accepted the concept of a monthly demand charge in lieu of Unit Tolls, the Companies address the pricing of interruptible service as follows:

> "TGW is also prepared to accept an interruptible toll that is adjusted seasonally based on the average load factor of the TGVI system" (TGW/TGVI Reply Submission, p. 16).

7.4.4 Views of the Commission Panel

The Panel finds that the Companies amended position is appropriate and requires that, as a condition precedent to the issue of a CPCN, the Companies amend the TSA so that the IT toll is established consistent with the determination for transmission system customers in the 2003 Rate Design Decision, or other IT tolls as approved by the Commission from time to time.

7.5 Curtailment

7.5.1 TGVI's Position

The executed TSA is silent on the subject of curtailment. TGVI states that

> should demand on the TGVI system exceed delivery capacity, TGVI will first suspend all interruptible transportation service, and then begin to call on its capacity right under BC Hydro's Peaking Agreement if required. The Core Market design day forecast is assumes a cold weather event equal to the coldest day in the last 25 years. It is therefore expected that TGVI would be able to meet all Core Market requirements with the capacity available from BC Hydro (Exhibit B1-13, BCUC IR-1 8.0); and
>
> events leading to a curtailment situation can be many things and the ability to manage each circumstance is highly dependent on the system dynamics at that point in time, which includes the rate of sendout when the problem occurs. Another key point is where the outage occurs. If supply is curtailed upstream of the interconnection of the Terasen Gas Inc. system with that of Westcoast Energy Inc. then TGVI will have different options available to it than if the event occurred on the Terasen Gas Inc. system or if it occurred on the TGVI system. Additionally, if the event occurred on the TGVI upstream of Squamish, the TGVI response may be different than if it occurred downstream of Squamish (Exhibit B1-14, p. 3; BCOAPO IR-1 1.6).

7.5.2 Intervenors' Positions

VIGJV submits that as a condition of the grant of a CPCN for the Whistler Facilities, TGVI be required to take appropriate steps to ensure that its existing shippers are not burdened with an additional risk of service curtailments. It should be made clear that TGW is not to have service priority over other shippers (VIGJV Submission, p. 8). The other Intervenors do not discuss the issue of curtailment.

7.5.3 Views of the Commission Panel

The Commission Panel considers that TGVI should curtail its customers when necessary in accordance with its approved General Terms and Conditions of Service, which cover all customers taking transmission service from it and accordingly no amendment to the TSA is required.

7.6 Termination Fee

7.6.1 General

The TSA requires payment by TGW to TGVI of the net book value of the Whistler Facilities less the unamortized portion of TGW's contribution (or such lesser amount that the Commission may determine) should TGW cancel the TSA after year 15. TGVI states that:

> The intention of the termination payment is to minimize the risk of "stranded assets" if TGW elects to terminate the TSA any time after the Initial Term. If TGW terminates the agreement, and subsequently the pipeline is no longer used and useful, a termination payment equivalent to the net book value of the facilities should keep all other TGVI customers whole relative to the scenario where the pipeline is never built. On the other hand, if the pipeline continues to be used to serve future loads in the Squamish to Whistler corridor that have not been identified today, there may be justification for a reduction in the termination payment. In this case, TGW and/or TGVI would apply to the Commission for approval of a reduced termination payment and the BCUC would make a ruling at that time (Exhibit B1-5, BCUC IR-1 25.3).

TGVI states that its other transportation customers have the following contract terms:

Customer	Term	Termination Fee
TGS	15 years, renewable year to year	Nil
BC Hydro	expires end of 2007, with one year renewable	Nil
VIGJV	expires end of 2012	Nil

7.6.2 Intervenors' Positions

The VIGJV submits that the Commission impose, as a condition to the grant of the CPCN for the Whistler Facilities, a requirement that TGW pay to TGVI, and agree to hold TGVI harmless in respect of, the full amount of any and all costs associated with (i) the Whistler Facilities and (ii) any incremental upstream facilities which, in either case, have not been fully recovered by TGVI as of the date of termination of the TGW TSA (VIGJV Submission, p. 3).

No other Intervenor comments on this matter.

7.6.3 The Companies' Response

The Companies reply that the addition of TGW as a customer does not immediately trigger any facility additions on the TGVI system, and future additions will be driven by TGVI's own core market growth and the future decisions of the VIGJV and BC Hydro when their existing transportation service agreements expire. Accordingly, a termination by TGW will not result in stranded facilities on the existing TGVI transmission system. The Companies submit that the proposed termination provision is fair to both TGVI (and its customers) and to TGW (TGVI/TGW Reply Submission, p. 18).

7.6.4 Views of the Commission Panel

The Commission Panel finds that notwithstanding the Companies' observation that TGW is unlikely to exercise its termination rights, the existence of the clause in the Agreement confers such rights on TGW and that it must address them. The Commission Panel is also cognizant that TGW should be required to seek Commission approval prior to exercising this right. As written the clause would only permit the Commission to determine an amount lesser than the net book value. The Commission cannot be bound in this fashion, and requires that as a condition precedent to the issue of a CPCN, the Companies amend the TSA to read as follows:

3.3 Termination. In the event that TGW exercises its right to terminate this Agreement in accordance with 3.2, TGW agrees to pay TGVI an amount equal to the then net book value of the Whistler Facilities less the then net book value of the TGW Capital Contribution; plus or minus any adjustments determined as appropriate and approved by the Commission.

7.7 Maximum Contract Demand

7.7.1 General

The TSA sets a maximum contract demand at 12,000 GJ/day. The Companies explain that they had inserted this clause in response to concerns that TGW might require capacity that is in excess of the design capacity of the IP Pipeline. They note that the design day forecast under the base demand scenario (Sustainable Technology) is approximately 7800 GJ/day at the end of the 25-year planning period. In the high demand scenario, the design day forecast is 9,300 GJ/day at the end of the same period, and they view the event as having a low probability (Exhibit B2-2, BCUC IR-1 30.1).

7.7.2 Intervenors' Positions

The Intervenors accept this, except for the VIGJV which argues that TGW's demand charge should be based on the 12,000 GJ/day capacity of the line (VIGJV Submission, p. 6).

7.7.3 The Companies' Response

The Companies reply that the VIGJV's submission is without merit, and should not acceptable for any party on TGVI's system. No customer on the TGVI system (or any other system of which the Companies are aware) has costs allocated to it today based on what it might (but probably will not) require in the future. They offer to remove the 12,000 GJ/day maximum Contract Demand from the TGW TSA statement saying that it serves no practical purpose other than indicating that if, beyond any reasonable expectation, the TGW load in Whistler grew beyond the design capacity of the IP Pipeline then new contractual arrangements would have to

be put in place (TGVI/TGW Reply Submission, p. 17).

7.7.4 Views of the Commission Panel

The Commission Panel accepts the maximum contract demand clause in the TSA. The Panel does not accept the VIGJV submission in this regard.

7.8 Contribution Agreement

7.8.1 TGVI Position

TGVI files an executed Contribution Agreement for Commission approval. TGVI explains the need for a contribution as follows:

> Due to the cost of the IP Pipeline relative to the size of the Whistler load addition on to the TGVI system, TGW will make a capital contribution to TGVI. This will reduce the cost of service impact to TGVI such that any increase in the cost of service it is expected to be fully offset by the tolling revenues that TGW will pay to TGVI for transportation service. The size of the capital contribution will depend on the final cost of the pipeline project, and will be recovered by TGW through the rates it sets for its own customers in Whistler (Exhibit B2-1, p. 32).

TGVI states that the TGVI rate base addition of $21.6 million is substantially similar for all cost scenarios. For the Base Cost Base Demand Case, it is the difference between the estimated total capital cost of $37.1 million and TGW contribution of $15.5 million (Exhibit B1-28, p. 23).

Notwithstanding the contribution from TGW, TGVI states that it will be the sole owner of the IP Pipeline and TGW will have no ownership interest. Under the three capital cost cases, the forecast TGW contribution is as follows:

Table 3 TGVI Rate Base Addition

IP Pipeline Cost Scenario ($000)	Low	Base	High
Direct Costs (2005$)	$27,692	$33,813	$39,692
Inflation	1,466	1,630	2,100
AFUDC	1,374	1,673	1,974
Total Capital (As Spent)	30,532	37,116	43,765
TGW Contribution	(8,828)	(15,519)	(22,276)
TGVI Rate Base Addition	$21,704	$21,597	$21,489

Source: Exhibit B1-28

The Companies describe the tax treatment of the contribution in the hands of TGW the payer as follows:

> For TGW, since the capital contribution is an intangible asset, tax treatment as an Eligible Capital Expenditure (ECE) is a potential category under which it will fall in the proposed arrangements. ECE is a CRA capital category for certain types of expenditures that are capital in nature but do not qualify for inclusion as assets on which CCA can be claimed. For an ECE type of expenditure 75 percent of the asset value is added to the ECE pool and the annual tax deduction rate is 7 percent on the declining balance (Exhibit B1-28, p. 3).

The Companies suggest an alternative pricing / contract structure could involve the use of a rider or separate annual demand charge in addition to the unit toll determined through the rolled-in postage stamp methodology. To have the same effect as the proposed capital contribution, this rider would be set to offset the cost of service impact that is in excess of the expected tolling revenues received from Whistler (Exhibit B2-2, BCUC IR-1 34.2).

TGW seeks to include the capital contribution amount in its rate base at the time natural gas commences and amortize it over 50 years (Exhibit B1-2, p. 2).

7.8.2 Intervenors' Positions

BC Hydro submits however, there is no need to use information available in 2006 to settle the amount to be added to TGVI's rate base in 2008. It would be more prudent and less speculative to wait until 2008 and use information available at that time to determine the amount to be added to TGVI's rate base.

There are several variables that have a significant influence on the amount to be added to TGVI's rate base. In late 2008, when the IP Pipeline is scheduled to go into service, some of those variables will be resolved, such as the CCA rate; some will be clearer, such as BC Hydro's transportation contracts with TGVI; and some will be less speculative, such as demand forecasts made in 2006 for periods after 2008 (BC Hydro Submission, p. 19).

In addition, BC Hydro submits that while the FT toll for TGW should be based on a revenue to cost ratio of 1.25, the higher revenue arising from the application of BC Hydro's proposed revenue to cost ratio should not be used in the methodology to determine the amount of the contribution. Rather, the amount should be based on the present value of allocated transmission costs (BC Hydro Submission, p. 16).

The VIGJV submits that the Contribution Agreement be amended to expand the definition of capital costs incurred by TGVI on the Project, and that the Commission direct TGW and TGVI to amend the Contribution Agreement to provide that, if and to the extent TGVI is required to increase upstream capacity as a result, directly or indirectly, of committing to provide the proposed service, TGW be required to make contribution to TGVI equal to those costs.

The VIGJV reminds the Commission that it should bear in mind that TGVI is a highly subsidized system requiring government support and substantial cross-subsidies from its existing transportation shippers to maintain competitive rates to its residential and commercial customers. History has shown that any increased costs will fall first directly onto the transportation customers. The VIGJV urges the Commission to act in defence of the interests of TGVI's existing shippers (VIGJV Submission, pp. 5-6).

The Intervenors do not comment on the proposal to include the contribution in rate base and amortize it over 50 years.

7.8.3 The Companies' Response

In Reply Argument the Companies characterized BC Hydro's submission to postpone the time for determination of the amount of the capital contribution as an attempt to cause the impact of the uncertainty caused by its unwillingness or inability to resolve its transportation arrangements to be visited upon TGW.

Nevertheless, the Companies state that if the Commission considers it appropriate to wait until 2008 to determine the final amount of the capital contribution, the Companies would not oppose that in principle. If the final determination of the capital contribution is postponed, the later review should include consideration of the final capital costs of the IP Pipeline, the resolution of the CCA class and income tax treatment of the IP Pipeline capital costs, and the then forecast of the load on the TGVI transmission system (TGVI/TGW Reply Submission, p. 27).

The Companies dismiss the VIGJV's request for amendments as unnecessary and comment on the VIGJV's submission to have TGW contribute 100 percent of the cost of upstream capacity TGW may have caused as follows:

> Since TGW will be paying its fully allocated costs it would be unreasonable to include a provision of the type requested by the VIGJV. Further it would be discriminatory and contrary to the *Utilities Commission Act* to include such a provision since it would impose on TGW a term that is not applicable to any other customer on the TGVI system, and to the knowledge of the Companies, is not applicable to any gas consumer in British Columbia (TGVI/TGW Reply Submission, p. 28).

7.8.4 Views of the Commission Panel

The Commission Panel accepts the principles under which the contribution amount will be calculated. However, in light of the number of uncertain matters outstanding at the present, the Commission Panel is persuaded by BC Hydro's submission that the amount be calculated upon completion of the IP Pipeline rather than today. In addition, the Panel

accepts BC Hydro's submission that the contribution amount be based on the net present value of the forecast of allocated transmission costs rather than on TGW revenues, if these are based on a revenue to cost ratio greater than 1 to 1. As a condition precedent to the issue of the CPCN, the Commission Panel requires that the Contribution Agreement be amended accordingly.

The Panel approves TGW's application to add the capital contribution amount to rate base at the time natural gas service commences and amortize it over 50 years.

The Commission Panel is not convinced by the VIGJV that the agreement as submitted requires the redefinitions requested by the VIGJV. The Commission Panel accepts the evidence of the Companies that the Whistler load will not cause TGVI to increase upstream capacity as so far as it can tell, to advance planned upstream capital expenditures. Accordingly, the Commission Panel denies the VIGJV request.

8.0 OTHER MATTERS

8.1 Potential Corporate Reorganization

8.1.1 The Companies' View

The Companies state that Terasen Inc. is exploring the possibility of some form of amalgamation or merger of its separate utility entities, including TGW and TGVI, for implementation at some as yet undetermined future date. Terasen Inc. has not reached a conclusion with respect to that option. If it pursues a form of amalgamation it expects that an application will be filed with the Commission seeking approval of such amalgamation, including the Company's rate proposals. The Company expects that the Commission will review that application in accordance with its powers under the UCA. At this time it is premature to establish or discuss how any group of customers might be treated in an amalgamation or merger (Exhibit B1-10, p. 8).

8.1.2 Intervenors' Positions

The CEC takes issue with the notion of prematurity and states that it should not be taken as a response that in the event the costs prove too much a burden for the competitive position of TGW that subsequently these costs can be rolled into other customer rates through amalgamation with other Terasen Inc. utilities (CEC Submission, p. 11).

8.1.3 The Companies' Response

The Companies reply that the form of amalgamation or merger, the utilities involved in such amalgamation, the timing of the amalgamation, and the terms under which the amalgamation would take place are not known at the current time. An amalgamation or merger will require that an application be brought before the Commission. A Commission Panel today cannot bind the Commission in the future (TGW/TGVI Reply Submission, p. 31).

8.1.4 Views of the Commission Panel

The Commission Panel agrees with the Companies that in the absence of any information concerning any corporate reorganization, it cannot speculate or comment on the matter.

DATED at the City of Vancouver, in the Province of British Columbia, this 18th day of May 2006.

A.J. Pullman
Panel Chair and Commissioner

R.J. Milbourne
Commissioner

P.E. Vivian
Commissioner

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BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER G-53-06

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

and

A Submission by Terasen Gas (Whistler) Inc.
for Review of its of 2005 Resource Plan Update

and

An Application by Terasen Gas (Whistler) Inc.
for a Certificate of Public Convenience and Necessity to convert its propane grid system
to natural gas and approval to enter into a Natural Gas Transportation Service
Agreement with Terasen Gas (Vancouver Island) Inc.

and

An Application by Terasen Gas (Vancouver Island) Inc.
for a Certificate of Public Convenience and Necessity
for a natural gas pipeline lateral from Squamish to Whistler

BEFORE: A.J. Pullman, Panel Chair and Commissioner
R.J. Milbourne, Commissioner
P.E. Vivian, Commissioner May 19, 2006

O R D E R

WHEREAS:

A. On December 12, 2005, Terasen Gas (Whistler) Inc. ("TGW") filed with the Commission its 2005 Resource Plan Update ("the Resource Plan") that provides an assessment of the current and future energy requirements at the Resort Municipality of Whistler ("RMOW") and concludes that the existing propane grid system should be converted to natural gas; and

B. On December 16, 2005, TGW filed with the Commission its application for a Certificate of Public Convenience and Necessity ("CPCN") to convert its system to natural gas and for approval to enter into a long-term natural gas transportation agreement with Terasen Gas (Vancouver Island) Inc. ("TGVI"). In the application, TGW also requests approval to make a capital contribution to TGVI and to add the contribution to rate base, to amortize the net book value of the propane facilities and to recover pipeline study costs incurred prior to 2004 ("the TGW Application"); and

…/2

C. Also, on December 16, 2005, TGVI filed with the Commission its application for a CPCN for construction of a natural gas pipeline lateral to connect RMOW to the TGVI transmission system at Squamish and to enter into a Transportation Service Agreement with TGW ("the TGVI Application"). The Resource Plan Application, the TGW Application and the TGVI Application will be referred to collectively as the "Applications"; and

D. Order No. G-23-06 dated January 26, 2006 determined that the Applications would be examined through a Written Hearing Process, and set out the Regulatory Timetable; and

E. The Commission has considered the Applications and the evidence and submissions presented to it and has determined that a Certificate of Public Convenience and Necessity should be issued provided the conditions in this Order are met.

NOW THEREFORE pursuant to Sections 45, 46, 64 and 71 of the Act, the Commission finds that the issue of a CPCN for TGW to convert its system to natural gas and for TGVI to construct a natural gas pipeline lateral to connect Whistler with its high pressure transmission system at Squamish will be in the public interest providing that the following conditions precedent are met:

1. TGW files within 10 days of the date of this Order, a statement regarding its willingness to accept a CPCN for the conversion of its propane system to natural gas that includes, as a condition, the mechanism to limit customer exposure to capital cost overruns that is described in Section 6.0 of the Decision that accompanies this Order.

2. TGVI files within 10 days of the date of this Order, a statement regarding its willingness to accept a CPCN for the construction of a natural gas pipeline lateral to connect Whistler and Squamish that includes, as a condition, the mechanism to limit customer exposure to capital cost overruns that is described in Section 6.0 of the Decision that accompanies this Order, together with the calculations required thereunder.

3. The Companies file, within 10 days of the date of this Order, a TSA revised in the following clauses: Contract Demand, Interruptible Tolls, and Termination as described in Section 7.0 of the Decision.

4. The Companies file, within 10 days of the date of this Order, a Contribution Agreement revised in the following manner: the timing and the methodology of the calculation of the amount of the contribution as described in Section 7.0 of the Decision.

The Commission also orders that:

1. TGW's application under Section 71 to discontinue propane service to Whistler when natural gas service is fully in place is hereby approved.

2. TGW's application to amortize the net book value of the propane facilities is approved.

3. TGW's application to amortize the pipeline study costs incurred prior to 2004 is approved.

4. TGW's application to include the capital contribution amount to rate base at the time natural gas service commences and amortize it over 50 years is approved.

DATED at the City of Vancouver, in the Province of British Columbia, this 18th day of May 2006.

BY ORDER

A.J. Pullman
Panel Chair and Commissioner

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

and

Terasen Gas (Whistler) Inc.
Certificate of Public Convenience and Necessity
for the Whistler Natural Gas Project

and

Terasen Gas (Vancouver Island) Inc.
Certificate of Public Convenience and Necessity for the
Squamish to Whistler Intermediate Pressure Pipeline

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated December 16, 2005 issuing Order No. G-149-05 and Notice of Procedural Conference
A-2	Letter dated December 23, 2005 issuing Commission Information Request No. 1 re: Terasen Gas (Whistler) Inc. 2005 Resource Plan Update (Exhibit B1-1)
A-3	Letter dated December 23, 2005 issuing Commission Information Request No. 1 re: Terasen Gas (Whistler) Inc. Certificate of Public Convenience and Necessity for the Whistler Natural Gas Project (Exhibit B1-2)
A-4	Letter dated December 23, 2005 issuing Commission Information Request No. 1 to Terasen Gas (Vancouver Island) Inc. re: Certificate of Public Convenience and Necessity for the Squamish to Whistler Intermediate Pressure Pipeline (Exhibit B2-1)
A-5	Letter dated January 25, 2006 filing the Regulatory Timetable, workshop date and advising of proposed second Procedural Conference and Commission Information Request No. 1 to the Squamish Nation
A-6	Letter dated February 8, 2006 issuing Commission Information Request No. 2 for 2005 Resource Plan Update (Exhibit B1-1)
A-7	Letter dated February 8, 2006 issuing Commission Information Request No. 2 to Terasen (Whistler) for CPCN Conversion of Propane Grid System (Exhibit B1-2) regarding responses to BCUC's IR No. 1 (Exhibit B1-5)

A-8	Letter dated February 8, 2006 issuing Commission Information Request No. 2 to Terasen (Vancouver Island) for CPCN Squamish to Whistler Pipeline (Exhibit B2-1) regarding responses to BCUC's IR No. 1 (Exhibit B2-2)
A-9	Letter dated February 6, 2006 issuing the Issues List for the public hearing
A-10	Letter dated February 7, 2006 and Information Request No. 1 to the Squamish Nation
A-11	Letter dated February 10, 2006 and Information Request to Canadian National Railway
A-12	Letter dated February 14, 2006 and Information Request to Ministry of Energy, Mines and Petroleum Resources
A-13	Letter dated February 16, 2006 and Information Request to MP Energy Inc.
A-14	Letter dated February 16, 2006 regarding Squamish Nation's request for confidentiality for two of the documents to be filed as part of its response to BCUC's Information Request No. 1 (Exhibit A-10) requesting participants to provide their submissions on this request
A-15	Letter dated February 17, 2006 to Canadian National Railway regarding Terasen (Whistler)'s February 15, 2006 response to Exhibit A-11, and requesting responses to Commission Information Request (Exhibit A-11) by March 9, 2006
A-16	Letter dated February 21, 2006 response to Squamish Nation's request (Exhibit C8-3) for an extension
A-17	Letter dated March 6, 2006 issuing an Amendment to the Regulatory Timetable
A-18	Letter dated March 13, 2006 advising participants of the Date, Time and Location for the Second Pre-hearing Conference
A-19	Letter dated March 15, 2006 to Terasen Gas Inc. regarding Mr. Johnson's undertaking made at the March 14, 2006 Procedural Conference (Transcript page 49) and requesting additional financial information
A-20	Letter dated March 15, 2006 and Order No. G-23-06 issuing the revised Regulatory Agenda
A-21	March 21, 2006 letter to Terasen Gas requesting that Table 7-2 from Exhibit B1-28 be filed

Exhibit No.	Description
A-22	March 23, 2006 letter and Order No. G-31-06 directing that the distribution of the redacted version of the Accommodation Agreement be limited to parties to the proceeding and that its terms be kept confidential
A-23	Letter dated April 11, 2006 to Michael D'Antoni, EMPR - Interrogatory Request

TERASEN GAS (WHISTLER) INC. DOCUMENTS

B1-1	Letter dated December 12, 2005 filing the 2005 Resource Plan Updated
B1-2	Letter dated December 14, 2005 filing and Application for a Certificate of Public Convenience and Necessity for the Whistler Natural Gas Project
B1-3	Letter dated January 9, 2006 confirming the date, time and location for the Procedural Conference
B1-4	Letter dated January 12, 2006 filing responses to Commission Information Request No. 1 regarding the 2006 Resource Plan Update
B1-5	Letter dated January 12, 2006 filing responses to Commission Information Request No. 1 regarding the Conversion of Propane Grid System to Natural Gas
B1-6	Letter dated January 23, 2006 filing responses to submissions by Intervenors regarding the submissions on the regulatory process made by Terasen Whistler and TGVI
B1-7	Letter dated February 6, 2006 filing presentation from Procedural Conference Workshop on February 2, 2006
B1-8	Letter dated February 15, 2006 clarifying statements in the Commission's Information Request to CN Rail regarding Terasen's (Whistler) relationship with CN Rail (Exhibit A-11)
B1-9	Letter dated February 17, 2006 Response to BCUC Information Request 57.1, 70.2, and 70.3 of the Resource Plan
	**** CONFIDENTIAL FILING ****
B1-10	Letter dated February 17, 2006 filing response to VIGJV Information Request No. 1 (Exhibit C2-4)

B1-11 Letter dated February 17, 2006 filing response to Commercial Energy Consumers Association of BC Information Request No. 1 (Exhibit C3-2)

B1-12 Letter dated February 17, 2006 filing response to Ministry of Energy and Mines Information Request No. 1 (Exhibit C1-3)

B1-13 Letter dated February 17, 2006 filing response to BC Hydro's Information Request No. 1 (Exhibit C11-3)

B1-14 Letter dated February 17, 2006 filing response to BCOAPO Information Request No. 1 (Exhibit C10-3)

B1-15 **REVISED -** Letter dated February 17, 2006 filing response to Commission's Information Request No. 2 (Exhibit A-6)

B1-16 **REISSUED AS EXHIBIT B2-3**

B1-17 Letter dated February 17, 2006 filing response to Commission's Information Request No. 2 to Terasen (Whistler) for CPCN Conversion of Propane Grid System (Exhibit A-7)

B1-18 Letter dated February 20, 2006 filing response to Commission's Information Request No. 1 regarding Squamish Nation's request for confidentiality (Exhibit A-14)

B1-19 Letter dated February 21, 2006 filing amended response to Ministry of Energy and Mines Information Request No. 1 and revised Exhibit 5.1

B1-20 Letter dated February 24, 2006 filing outstanding and revised Information Request No. 1 to BC Hydro (Exhibit C11-3)

B1-21 Letter dated February 24, 2006 filing the evidentiary update to the TGW 2005 Resource Plan Update, the TGW CPCN Application to convert its propane and the TGVI CPCN Application to construct an IP Pipeline from Squamish to Whistler

B1-22 Letter dated March 1, 2006 filing comments responding to Squamish Nation's withdrawal of request for confidentiality (Exhibit C8-5)

B1-23 Letter dated March 2, 2006 advising that TGW and TGVI do not object to BC Hydro's request for an extension to file, by March 3, 2006, additional Information Requests and/or evidence in this proceeding

B1-24 Letter dated March 9, 2006 filing Information Request No. 2 to BC Hydro (Exhibit C11-6)

B1-25 Letter dated March 9, 2006 filing Information Request No. 3 to BC Hydro (Exhibit C11-7)

Exhibit No.	Description
B1-26	Letter dated March 9, 2006 filing Information Request No. 2 to BCOAPO (Exhibit C10-4)
B1-27	Letter dated March 10, 2006 filing Terasen Gas (Whistler) and TGVI an Accommodation Agreement with the Squamish Nation
B1-28	Letter dated March 17, 2006 filing the evidentiary update to the TGW 2005 Resource Plan Update addressing the matters discussed at the Procedural Conference of March 14, 2006
B1-29	Letter dated March 22, 2006 filing response to email from K. Gustafson (Exhibit C2-9)
B1-30	Letter dated March 23, 2006 filing the Redacted Version of the Accommodation Agreement with the Squamish First Nations in accordance with the Commissions' Order G-31-06 ****CONFIDENTIAL FILING****
B1-31	Additional Revised Application Materials as requested in the BCUC Letter dated March 21, 2006 (Exhibit A-21) with respect to TGW's and TGVI's March 17, 2006 Evidentiary Update filing (Exhibit B1-28)
B1-32	Letter dated March 30, 2006 filing attachments for information responses (Exhibit B1-4) to Commission Information Requests 22.1, 22.2, 33.3 and 56.1
B1-33	Letter dated March 31, 2006 filing response to Commission's Order No. G-23-06, Item I, copy of executed Capital Contribution and Transportation Service Agreements
B1-34	Letter dated March 31, 2006 filing Submissions on behalf of Terasen Gas (Whistler) and Terasen Gas (Vancouver Island) with respect to the 2005 Resource Plan Update, Application to Convert Propane Grid to Natural Gas and Application to Construct Natural Gas Pipeline from Squamish to Whistler **NOTE:** Inadvertently posted as Exhibit – Now posted under "Arguments"

TERASEN GAS (VANCOUVER ISLAND) INC. DOCUMENTS

B2-1 Letter dated December 14, 2005 filing an Application for a Certificate of Public Convenience and Necessity for the Squamish to Whistler Intermediate Pressure Pipeline

B2-2 Letter dated January 12, 2006 filing responses to Commission Information Request No. 1 regarding the Squamish to Whistler Intermediate Pressure Pipeline

B2-3 **REVISED -** Letter dated February 17, 2006 filing response to Commission's Information Request No. 2 to Terasen (Vancouver Island) for CPCN Squamish to Whistler Pipeline (Exhibit A-8)

INTERVENOR DOCUMENTS

C1-1 **MINISTRY OF ENERGY, MINES & PETROLEUM RESOURCES ("MEMPR")** – Notice of Intervention dated December 22, 2005 from Stirling Bates

C1-2 Letter dated January 20, 2006 from Stirling Bates response to request for submissions from intervenors regarding workshop for Negotiated Settlement Process

C1-3 Letter dated February 8, 2006 from Michael D'Antoni filing Information Request No. 1

C1-4 Letter dated February 27, 2006 from Paula Barrett commenting on the Squamish Nation's request for confidentiality (Exhibit C8-3) arising from the Commission's Information Request No. 1 (Exhibit A-10)

C1-5 Letter dated March 3, 2006 filing responses to Commission Information Request No. 1 (Exhibit A-12)

C2-1 **VANCOUVER ISLAND GAS JOINT VENTURE ("VIGJV")** – Notice of Intervention dated December 22, 2005 from Karl E. Gustafson

C2-2 Letter dated January 20, 2006 filing comments in response to the proposals made by Terasen's counsel

C2-3 Letter dated January 25, 2006 responding to Exhibit B1-6 from Scott Thomson of Terasen Whistler and its reply to written submissions of various Intervenors

Exhibit No.	Description
C2-4	Letter received February 8, 2006 filing Information Request No. 1 to Terasen (Whistler) and Terasen (Vancouver Island)
C2-5	Email received February 16, 2006 requesting Mr. McDade to clarify the request set out in his letter (Exhibit C8-3)
C2-6	Letter dated February 20, 2006 responding to the Squamish Nation's request for confidentiality
C2-7	Letter dated March 1, 2006 filing comments in response to Squamish Nation's withdrawal of request for confidentiality (Exhibit C8-5) and response from Matthew Ghikas of Fasken Martineau Gas (Whistler)
C2-8	Email received March 17, 2006 filing request to Terasen Gas Regulatory Affairs for a copy with of the Accommodation Agreement with the Squamish Nation
C2-9	Email dated March 21, 2006 regarding the redacted form of the SFN Agreement
C3-1	**COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA ("CEC")** – Notice of Intervention dated January 4,2006 from Christopher P. Weafer
C3-2	Letter dated February 8, 2006 filing Information Request No. 1 to Terasen (Whistler) and Terasen (Vancouver Island)
C4-1	**THOMSON, HEIDI** – Notice of Intervention dated January 3, 2006
C5-1	**THE PROGRESSIVE GROUP** – Notice of Intervention dated January 5, 2006 from Cindy Burton
C6-1	**VAN ZEYL, DAVE** – Notice of Intervention dated January 6, 2006 – Simon Fraser University, Department of Earth Sciences
C7-1	**RESORT MUNICIPALITY OF WHISTLER** – Notice of Intervention dated January 9, 2006 from Lisa M. Landry & Brian Barnett

C8-1 **SQUAMISH FIRST NATION** – Notice of Intervention dated January 10, 2006 from Gregory J. McDade, Ratcliff & Company

C8-2 Letter dated January 20, 2006 from Ratcliff & Company response to request for written submissions from Squamish First Nation regarding proposals made by Terasen's counsel at the Procedural Conference

C8-3 Letter dated February 16, 2006 from the Squamish Nation regarding the confidentiality of two documents that it intends to submit as part of its response to Commission Information Request No. 1 (Exhibit A-10)

C8-4 Letter dated February 17, 2006 filing the Squamish Nation's response to Information Request No. 1 (Exhibit A-10)

C8-5 Letter dated February 22, 2006 filing the Squamish Nation's revised response to Information Request No. 1 (Exhibit A-10)

C8-6 Letter dated March 10, 2006 filing withdrawal of Registered Intervenor Status

C9-1 **COLES, BOB** – Notice of Intervention dated January 10, 2006 (Sandwell Engineering)

C10-1 **THE BC OLD AGE PENSIONERS ORGANIZATION *ET AL*. (BCOAPO)** – Notice of Intervention dated January 10, 2006 from Richard Gathercole, The British Columbia Public Interest Advocacy Centre

C10-2 Letter dated January 20, 2006 from BCOAPO's request for a change of date for workshop and a second procedural conference after the workshop

C10-3 Letter received February 9, 2006 filing BCOAPO's Information Request No. 1 to Terasen Gas (Vancouver Island)

C10-4 Letter received February 24, 2006 filing BCOAPO's Information Request No. 2

C11-1 **BRITISH COLUMBIA HYDRO AND POWER AUTHORITY (BC HYDRO)** – Notice of Intervention dated January 12, 2006 from Joanna Sofield

C11-2 Letter dated January 20, 2006 filing comments summarizing BC Hydro's position on matters raised during the Procedural Conference of January 17, 2006

Exhibit No.	Description
C11-3	Letter dated February 6, 2006 to Terasen Gas filing BC Hydro's Information Request No.1 to Terasen Gas (Vancouver Island) Inc. and Terasen Gas (Whistler) Inc.
C11-4	Letter dated February 20, 2006 responding to the Squamish Nation's request for confidentiality
C11-5	Letter dated February 24, 2006 to Terasen Gas (Whistler) and TGVI filing BC Hydro's request for extension of time to respond to Intervenors and Commission's Information Request No. 2 and/or Evidence
C11-6	Letter dated February 24, 2006 to Terasen Gas (Whistler) and TGVI filing BC Hydro's Information Request No. 2
C11-7	Letter dated March 3, 2006 to Terasen Gas (Whistler) and TGVI filing BC Hydro's Information Request No. 3
C12-1	**WILSON, DAN –** Notice of Intervention filed January 27, 2006 on the website

INTERESTED PARTY DOCUMENTS

D-1	BAILEY, Richard A. – Notice of Interested Party status
D-2	KLEINSCHMIDT, Al – Notice of Interested Party status
D-3	CANADIAN NATIONAL (CN) - WESTERN CANADA REGION – Letter dated March 6, 2006 filing response to Commission's Information Request No. 1 (Exhibit A-11 and Exhibit A-15)
D-4	MP ENERGY – Letter dated March 6, 2006 filing response to Commission's Information Request No. 1

LETTERS OF COMMENT

E-1	Letter dated December 7, 2005 from the Whistler Resort Municipality supporting Terasen Whistler's 2005 Resource Plan Update
E-2	Letter dated April 28, 2006 from Gary Yabsley of Ratcliff & Company on behalf of the Lil'wat Nation regarding the Accommodation Agreement