IN THE MATTER OF

FORTISBC ENERGY INC.

APPLICATION FOR APPROVAL OF A CAPITAL EXPENDITURE SCHEDULE,
RATE DESIGN AND RATES
FOR AN OPERATING AND MAINTENANCE AGREEMENT
TO PROVIDE THERMAL ENERGY SERVICES
BETWEEN FORTISBC ENERGY INC.
AND THE STRATA CORPORATION OF TSAWWASSEN SPRINGS DEVELOPMENT

DECISION

July 20, 2012

Before:

D.M. Morton, Commissioner/Panel Chair
R.D. Revel, Commissioner

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1.0 EXECUTIVE SUMMARY

This is a decision on an application by FortisBC Energy Inc. (FEI) for approval of expenditures under section 44.2 of the *Utilities Commission Act (UCA)* and of a rate design and rate under sections 59 - 61 of the *UCA* (the Application).

This is the second application of this nature from FEI. FEI's traditional line of business is the distribution of natural gas (NG) to residential and commercial customers in British Columbia. In FEI`s 2010-2011 Revenue Requirements Application (2010-2011 RRA), FEI requested approval to provide Alternative Energy Solutions (AES), defined as geo-exchange, solar and district energy systems. Through a Negotiated Settlement Agreement (NSA) process, the British Columbia Utilities Commission (Commission) approved this request, along with General Terms and Conditions Section 12A: Alternative Energy Extensions (GT&C 12A), which entitled FEI to charge a rate to an AES customer that recovers all costs of service for a project from that customer. The 2010-2011 RRA also approved the establishment of a New Energy Solutions deferral account – now called the Thermal Energy Services Deferral Account (TESDA) – that was intended to provide protection for FEI`s NG distribution customers from cross subsidization of the nascent AES business. To that end, the TESDA was to be used to capture and record revenues and expenses associated with AES projects and services. Since that time the TESDA has accumulated over $5 million which represents, for the most part, marketing and business development costs for the new AES line of business. FEI has committed to submitting a rate design application in 2012 to address the just and fair allocation of TESDA costs to all thermal customers.

On the face of it, the Application seems straightforward. The expenditure is to purchase four Loop Field Systems (LFS), which are a key component of a Ground Source Heat Pump (GSHP) system. The GSHP systems have been, or will be, constructed to serve a single strata condominium development, the Tsawwassen Springs Development (the Development), comprising four buildings with each building having its own GSHP system. The GSHPs will provide a significant amount of each building's heat and hot water requirements, with auxiliary gas fired boilers providing the remainder, thus potentially reducing the development's greenhouse gas (GHG) footprint

substantially over an all-gas reference case. The LFS systems are, or will be, fully constructed, operational and tested when FEI takes ownership, thus virtually eliminating any construction risk for FEI. The total expenditure is a little over $1 million. The project is exempted from Certificate of Public Convenience and Necessity (CPCN) requirements by the Alternative Energy Solutions and Other New Initiatives Inquiry (AES Inquiry), hence FEI applied for approval under section 44.2 of the *UCA*.

FEI has entered into contracts with the developer to purchase each LFS, and to operate and maintain the LFS systems for a period of 25 years. The Operating and Maintenance Agreement (O&M Agreement) commits FEI to maintain and repair the LFS throughout the term in accordance with the LFS design and operating specifications and requirements. In return for this service, FEI will charge the Strata Corporation (Strata) a monthly rate, independent of the amount of energy taken, that allows FEI to recover its amortization on the capital expenditure along with its O&M expenses. The O&M Agreement also includes a provision for annual escalation of the O&M costs at a rate that reflects the Consumer Price Index or two percent, whichever is greater.

The Panel generally has little or no concern with any of the foregoing and approves the expenditures. However, there are issues with the rate design that concern the Panel. These issues are of particular concern as the discrete thermal service market, while regulated, is a non-natural monopoly, with other providers potentially competing to provide the same services.

The just and fair recovery of the existing TESDA balances raises a concern for both the Panel and Intervener Corix Utilities Inc. (Corix) in this application. The closed, fixed price nature of the O&M Agreement does not readily allow for changes to the rate, particularly to reflect such changes as future TESDA rate design to fairly allocate the balance of the TESDA account between all of FEI's thermal service customers. This is in contrast to the previous thermal energy services (TES) application from FEI – for provision of thermal services to Delta School District Number 37 (Delta SD). In that instance, the school district is fully responsible for its proportional share of the TESDA balance, whatever that amount may be and however that amount may be determined.

Further, under FEI's proposed fixed rate, any unexpected costs incurred by this project are to be charged to the TESDA, thereby ensuring that other AES customers, *but not the Strata or FEI's shareholders*, will be responsible for them. This is again different from the treatment of Delta SD, where revenues are more closely aligned to actual costs through the annual revenue requirements process. However, while a traditional fixed price contract places the risk of any over and under recoveries on the shareholder, in this case the risk has been shifted to other thermal customers. The requirement that each project recover its associated costs only from its own customer base is important to the operation of the market in a regulated, non-natural monopoly environment, and to ensuring that customers are faced with prices which promote efficient investment decisions – if shareholders wish to subsidize rates, that would be acceptable.

The Panel is of the view that this is an unintended and inappropriate use of the TESDA. Even though the dollar amounts may not be large, the Panel agrees with Corix that a principled approach is preferred. The proposed approach neither recovers all the costs of the project, as is required by GT&C 12A, nor provides for a fair and just allocation of the existing costs in the TESDA to this project. Accordingly, the rate design is denied. The Panel would consider a rate design that utilized, instead of the TESDA, a separate deferral account for this project with the Tsawwassen Springs ratepayers responsible for this account or a fixed rate design that enabled the shareholder to be responsible for any under or over recoveries.

Others issues with the rate design include the levelized nature of the rates over 25 years, the return on equity (ROE) and the cost of debt. While that levelization may be appropriate in some circumstances, for example where the thermal plant is in place and charging rates to customers before the building is fully occupied. However, that is not the case here, where the developer has agreed to assume the financial obligations with regard to the payment of the LFS fees for any unsold units. However, the panel is prepared to accept the levelization in the case where FEI takes direct responsibility for any economic risk. The Panel would also accept levelization over shorter periods in other rate design scenarios. The Panel is also of the view that there is not sufficient economic risk, in the rate design proposed in the application, to justify the requested 50 basis

points (bps) premium. However, the Panel is prepared to grant the requested premium in the event that FEI assumes all economic risk.

In the Delta SD application, the Commission expressed concerns about the allocation of costs between the thermal side and the distribution side of FEI`s business, in light of the provision of competitive services by a monopoly provider. This was of particular concern given that many of the same employees and contractors are involved on both sides of the business. It was the Commission's view that the risk of cross-subsidization by the natural gas ratepayer could be mitigated, at least to some extent, by requiring that the discrete thermal energy service to the school board be provided by a separate entity. In addition, the issue of whether the thermal service should be provided by a separate entity, instead of FEI, is an issue in the ongoing AES Inquiry. Accordingly, the Commission ordered the service to be provided by a separate entity. The Panel considers that many of these concerns are relevant to this application and orders that this project be moved to a separate entity, which could be the same entity that is providing service to the Delta School Board.

2.0 INTRODUCTION

This Decision deals with an application by FEI for the acceptance of a capital expenditure schedule for the purchase of a LFS from the developer of the Tsawwassen Springs strata title condominium development and for the approval of the rate design and rates established in a Service Agreement to operate and maintain that LFS in the interests of the owners as just and reasonable.

The Development is a four-phased residential development which receives a substantial part of its heating and domestic hot water energy requirements from a GSHP installation. The LFS purchased by FEI constitutes part of that GSHP system with the remainder of the GSHP system being owned by the strata title holders and/or the developer. (Exhibit B-1, p. 3)

2.1 The Applicant

FEI is a wholly-owned subsidiary of FortisBC Holdings Inc, a wholly-owned subsidiary of Fortis Inc. FEI is the largest natural gas distribution utility in British Columbia, representing over 80 percent of the province's natural gas customers. It services approximately 930,000 customers by providing sales and transportation services to residential, commercial and industrial customers in more than one hundred communities. FEI has credit ratings for unsecured debentures from Dominion Bond Rating Service and Moody's Investors Service of A and A3 respectively. (March 9, 2012 Decision on FEI's CPCN Application for Delta School District No. 37, Reasons for Decision, p. 5)

FEI has been actively repositioning itself from a traditional natural gas distribution utility to a more comprehensive energy company focusing, in part, on alternative energy sources (FEI/Delta School Board, Reasons for Decision, p. 1). The Development constitutes a further step in this repositioning process.

2.2 The Project

FEI will provide TES for the Development by owning, operating and maintaining four geo-exchange loop field systems and charging a rate for that service.

The energy systems that will be installed will be completely within the Development lands and will not have any direct impacts on others. (Exhibit B-1, Cover Letter, p. 2)

Each LFS will provide thermal energy and deliver it to the Strata by connecting to equipment that the Strata will own and operate. Further, the Strata will own the mechanical equipment that causes the circulation of the water/glycol mixture in each LFS that FEI owns and operates and will be responsible for purchasing any electricity or natural gas necessary to operate their equipment. FEI will not be metering the thermal energy that FEI provides through each LFS and delivers to the Strata (Exhibit B-1, p. 1). Under the O&M Agreement, FEI is required to maintain the LFS in accordance with the LFS design and operating specifications and requirements, monitoring temperature and pressure of the thermal fluid, monitoring and maintaining pH value of thermal fluid, and monitoring and maintaining the proper volume of thermal fluid in the LFS (Exhibit B-8, BCUC 1. 3.7).

FEI has purchased the Phase 1 LFS through the "Loop Field System Purchase and Sale Agreement" with the Developer (Exhibit B-1, p. 1).

Full build-out of the Project will include four phases of Strata title residential dwellings, each with its own building. Phase 1 incorporates 55 apartment-style strata lots in a four-story wood frame building. Phases 2 and 3 each include 93 apartment-style strata lots in six-story concrete buildings. Phase 4 is similar to Phase 1. Phase 1 is presently complete, and fully sold and inhabited, with the GSHP system, including the LFS, operational. Phase 2 is expected to be completed in 2013, Phase 3 in 2014 and Phase 4 in 2015. (Exhibit B-1, pp. 9-10)

2.3 Key Stakeholders and Contracts

There are three principal stakeholders related to the Development: Tsawwassen Golf & Country Club Ltd. (the Developer), the Strata and the individual condominium unit owners.

During the initial construction stage of each of the four phases, the Developer is the primary stakeholder as the installation and implementation of the GSHP system is a condition of the development permit provided by the Corporation of Delta as part of the Developer's sustainability commitment. Installation of the GSHP and associated LFS is a requirement for completion of the project. (Exhibit B-1, p. 6)

As each of the four phases are completed and sold, the primary stakeholder interests shift from the Developer to the strata title holders through their elected Strata Corporation which is charged with the management of the development on behalf of the strata unit holders. Presently Phase 1, comprising 55 units, is constructed and the associated LFS is operational. The Strata Corporation has been incorporated and will be assigned the contract between FEI and the Developer when formally constituted (Exhibit B-1, p. 1). As currently planned, at full build-out in 2015 there will be one Strata representing the interests of all 296 Strata title holders. (Exhibit B-1, p. 9)

In the event that disputes arise between FEI and the Strata, the Strata can invoke the Dispute Resolution Clause as outlined in Article 15 of the confidential Service Agreement or make a complaint to the Commission.

2.4 The Rate

FEI indicates that the cost-of-service rates provided for in the Service Agreement and for which FEI seeks approval are based on the cost-of-service model and cost inputs set forth in section 12A of FEI's GT&C 12A that were approved in FEI's 2010-2011 RRA. Although the Commission has made GT&C 12A interim by Order G-223-11, FEI indicates that the interim nature of this tariff should not

affect the approval of the Application. FEI further indicates that the rates presented in this Application follow the cost-of-service rate design principles and allow FEI to recover costs for providing service to the Strata during the contract period. (Exhibit B-1, Cover Letter, p. 2)

FEI will not be metering the thermal energy provided by the LFS to the Strata and instead is seeking approval for a rate design of a monthly fee, with annual escalation, based on a levelized cost of service model, a 40 percent equity/60 percent debt capital structure and a ROE of 10.0 percent, which is a 50 bps equity risk premium over the benchmark utility ROE for a term of 25 years for each LFS.

2.5 The Benefits

In the application, FEI states that "The developer chose to meet the energy requirements of its Development with a geo-exchange thermal energy system as a marketing initiative for the project and to meet their sustainability commitments to the Corporation of Delta." (Exhibit B-1, p. 5)

Further, FEI notes that the geo-exchange thermal energy system will provide up to 90 percent of the overall energy required for space heating, thereby reducing the consumption of natural gas. Additionally, two domestic water pre-heat heat pumps in the mechanical room will pre-heat domestic hot water that is stored in tanks. (Exhibit B-8, BCUC 1.18.2)

In response to BCUC 1.4.1, concerning the benefits of the agreement to the Developer, FEI explains that most residential developers FEI has worked with have not expressed an interest in owning and operating the development's energy system over a very long period as this approach is incongruous with the development model whereby a special purpose company is formed to develop a project and is then wound up shortly after the project is completed. Unlike most commercial operations, developers for residential developments usually focus on a relatively short development period and do not want to deal with ongoing management of these projects. (Exhibit B-8, BCUC 1.4.1)

In choosing FEI as the owner of the LFS, the Developer stated that it wanted to have FEI own the LFS based on the negotiated rate that FEI would charge and the benefits associated with a reputable utility provider taking responsibility for the operation and maintenance of the LFS (Exhibit B-8, BCUC 1. 2.3.1).

Furthermore, by FEI purchasing the LFS, the developer‘s cost structure and the energy costs to the Strata holders are more representative of a conventional energy system (Exhibit B-8, BCUC 1.4.1).

At a higher level, there are benefits associated with using innovative geothermal energy technology that supports energy conservation and efficiency through the use of a renewable resource as well as reducing BC’s GHG emissions by an estimated 434 tCO_2e annually for all four Phases (Exhibit B-8, BCUC 1.22.1).

3.0 ORDERS SOUGHT

In the Application, FEI seeks acceptance of capital expenditures, pursuant to section 44.2 of the *UCA*, of $1.184 million for the LFS component of the GSHP system. While the current CPCN threshold for AES projects was lowered to zero as part of the AES Inquiry pending a final decision on a suitable threshold for future thermal projects, in the interim the Commission granted a CPCN exemption for the Development, along with three other thermal projects (Order G-9-12), as construction was started well in advance of the Order (G-1-12), and outside of the 30-day period that is described in section 45(5) of the *UCA*. FEI has therefore applied for approval under section 44 of the *UCA*.

FEI also seeks approval, pursuant to sections 59-61 of the *UCA* and Commission Order G-141-09, of the rate design and rates established by the Service Agreement filed with this Application as just and reasonable.

4.0 REGULATORY PROCESS

FEI proposed a regulatory review consisting of the Commission and Registered Interveners filing written comments on the Application. FEI would have then addressed concerns raised in written comments through a written submission. FEI submitted that this approach is appropriate and efficient for this Application for the following reasons:

- The cost of service rates provided for in the Service Agreement and for which FEI seeks approval are based on the cost-of-service model and cost inputs set forth in section 12A.
- The size of the project is rather small.
- The energy systems that will be installed will be completely within the Development lands and will not have any direct impacts on others.
- FEI's natural gas customers will not be adversely impacted by the thermal energy service.
- The rates for this service are set according to a cost-of-service forecast for the term of the contract for FEI to own and operate only one component of the thermal energy equipment.
- An inquiry into FEI's "alternative energy services" is underway.

  (Exhibit B-1, Cover Letter, p. 2)

The Commission established a Written Hearing Process for the review of the Application. The Regulatory Timetable (Appendix A) incorporated two rounds of Information Requests from the Commission and Registered Interveners.

Registered Interveners in this hearing were the B.C. Sustainable Energy Association and the Sierra Club of British Columbia (BCSEA), Corix, and the Commercial Energy Consumers Association of British Columbia (CEC).

The Commission, by letter dated April 5, 2012 to FEI and Registered Interveners, requested comments on the suitability of utilizing the Streamlined Review Process (SRP) following the first round of Information Requests. BCSEA and Corix responded that they had no concerns about the application being heard under the SRP, and the CEC provided no comment. FEI responded that the SRP might not be appropriate in this case given the broader policy issues of the AES Inquiry that

might be repeated within this Application without limiting the scope of the SRP. FEI also commented that a written process "may be more effective than the proposed SRP, as any remaining issues will and should be succinct and specific." (Exhibit B-6, p. 2)

The Commission agreed to hold the information in the O&M Agreement (Appendix A of the Application) as confidential until such time as the project is approved, and the information in the Purchase and Sale Agreement (Appendix B of the Application) as confidential for an indefinite period (Exhibit A-1, Order G-33-12).

5.0 HISTORICAL BACKGROUND

There are a number of proceeding hearings that have made various directions regarding FEI's Thermal Energy Services initiative. In addition, the AES Inquiry is taking place concurrently, and is intended to establish principles applicable to the TES business.

5.1 2010-2011 Revenue Requirements Application

5.1.1 The Thermal Energy Services Deferral Account (TESDA)

By Commission Order G-141-09 dated November 26, 2009, the Commission approved for FEI a NSA for the 2010-2011 RRA proceeding, which included approval for the provision of Alternative Energy Solutions (AES) described as including geo-exchange, solar thermal and district energy systems. During the hearing, issues of cross-subsidization of the nascent AES business from the gas distribution ratepayers were raised by various interveners. By Order G-141-09, the Commission approved a new deferral account, the New Energy Solutions Deferral Account, as an "…appropriate mechanism to address allocation issues between TGI's gas customers and TGI's AES customers." (Order G-141-09, pp. 8-9).

The New Energy Solutions Deferral Account was ordered to remain in effect pending a future rate design application at an unspecified future date after 2011. The approved NSA specified that the following amounts were to be captured and recorded (plus Allowance for Funds Used During Construction (AFUDC)) for recovery from AES customers:

(a) Direct costs associated with AES projects as outlined on pages 267-268 of the Revenue Requirements Application, including cost of design, equipment, etc. constructing and financing. The costs listed on pages 267-268 of the application are Capital Expenditures, O&M Expenditures, Inflation, Income Tax, Depreciation, Capital Cost Allowance, TGI Capital Structure/Cost of Debt, Thermal Requirements, Carbon Costs and Avoided Cost of Equipment in Individual Units; and

(b) Sales and marketing Operations and Maintenance (O&M) and other development costs will be directly charged to the deferral account by time sheets or other direct charge (estimated at $1.0 million in 2010 and $1.5 million in 2011, representing a portion of the agreed upon

Gross O&M reduction from gas customers of $4.0 million in 2010 and $5.5 million in 2011); and

(c) An appropriate overhead allocation, which the parties have agreed will be $500,000 in each of F2010 and F2011 (representing a portion of the agreed upon Gross O&M reduction from gas customers of $4.0 million in 2010 and $5.5 million in 2011).

Revenues received from customers for all AES projects, which are based on contracts approved by the Commission, will be recorded in this deferral account. The risk of non-recovery of amounts in this deferral account will not be borne by natural gas ratepayers; any debit balance will not be recovered through natural gas rates and any credit balance will not be applied to reduce natural gas rates.

The New Energy Solutions Deferral Account was subsequently renamed the TESDA.

5.1.2 General Terms and Conditions, Section 12A: Alternative Energy Extensions

The NSA also accepted GT&C 12A and an economic screening tool for AES projects and provided that FEI could make application for acceptance of project-specific contracts as a rate under the AES class of service. The NSA also provided that when the Commission reviews these applications it may review and adjust the economic test and GT&C 12A.

The key elements of GT&C 12A are:

(a) Section 12A.1 describes, in general terms, the nature of the thermal energy systems that are contemplated under GT&C 12A;

(b) Section 12A.2 requires that FEI own all thermal energy extensions;

(c) Section 12A.3 requires that the cost-of-service model will determine the rate that a customer will pay for the service associated with the alternative energy extension, and that service will be provided under the terms and conditions of the Service Agreement between FortisBC Energy and the Customer;

(d) Section 12A.4 sets out requirements for determining consumption and number of customer estimates to be used in the cost-of-service model;

(e) Section 12A.5 sets out the required cost elements for the cost-of-service model.

By Commission Order G-223-11, GT&C 12A was subsequently declared interim effective January 1, 2012, pending the resolution of, among other issues, whether the suitability of the traditional cost-of-service model for thermal energy services should be dealt with in the AES proceeding.

5.2 FortisBC Energy Utilities 2012-2013 Revenue Requirements

In the FortisBC Energy Utilities (FEU) (comprising FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc.) 2012-2013 Revenue Requirements and Natural Gas Rates Application (RRA Application), the Commission reviewed the TESDA account, and determined that the $500,000 overhead allocation from FEI's distribution customers to the TESDA was insufficient. Accordingly, FEI was directed to increase the allocation to $750,000 for each year of the test period.

FEI explained in the RRA Application: "It is also our intention to include in the [TESDA] TES project costs related to sales and marketing O&M, and overhead costs that have been incurred to-date and going forward. The methodology of how such costs will be allocated will be discussed in the first AES project to be filed in the coming months." (RRA Application, Exhibit B-9, FEU response to BCUC 1.164.6)

5.3 AES Inquiry

This project falls within the broader alternative or thermal energy service class of service being considered in the AES Inquiry. The Inquiry was established by Order G-95-11 in response to a complaint about FEI's AES activities. The Inquiry is not intended to be a means to re-open past Decisions of the Commission or to impinge on any regulatory processes currently underway before the Commission. It is a forward-looking assessment with the aim to establish principles that can be applied to future regulatory processes in the area of AES and other new initiatives.

To this end, by Order G 95-11, the Commission provided a Scoping Decision in the AES Inquiry in which it stated:

> "The Panel agrees that it is not appropriate for this Inquiry to be used as a vehicle to re-open past Decisions of the Commission. With respect to ongoing processes that may have some degree of overlap with the issues being considered by this proceeding, the Panel believes that such processes will be decided on the basis of the evidence put before them. While it may be beneficial to have the outcome of this proceeding known before similar issues are dealt with in other ongoing proceedings, it would be inefficient and potentially unfair for such proceedings to be delayed. The Panel sees the outcome of this proceeding as being applied in a forward looking manner and not impinging on past or current ongoing proceedings. The Commission does encourage interested parties to look at past Decisions and only where appropriate bring forward portions of decisions that may be of assistance to the Panel in determining the principles that should be applied to resolve the issues before the Inquiry."

In this Decision, the Commission Panel does not pre-judge the AES Inquiry findings and will assess the Development solely within the existing regulatory context. However, the Panel will defer any determinations of higher-level principles to the AES Inquiry.

5.4 Delta School District Decision

The Development is the second AES project that FEI has brought before the Commission since the AES Inquiry was begun. The first was an application for a CPCN for approval of contracts and rates for public utility service to provide thermal energy service to Delta SD. This was the first application of its kind received by the Commission. In the Reasons for Decision accompanying Order G-31-12, the Commission made a number of directives that may also have applicability to this Application:

(a) FEI sought to provide thermal service to Delta SD under GT&C 12A. However, the thermal service included sites with both GSHPs in combination with high-efficiency boilers and stand-alone gas boilers. The Commission deferred to the AES Inquiry a decision on the inclusion of stand-alone natural gas boilers in the tariff.

(b) The Commission directed that the thermal services to be provided to Delta SD be done so by a separate corporate entity. FEI was further directed to develop a consistent cost allocation methodology and to follow its transfer pricing policy, if applicable, to allocate

appropriate costs to Delta SD thermal services. FEI was also directed to track and charge to its affiliate all overhead costs incurred for the provision of services to Delta SD.

(c) The Commission directed that the rate and rate design be based upon a 60/40 debt equity capital structure which contains the following modifications:

   a. The rate schedule is restricted to Delta SD's current and future sites;

   b. The rate must include allowances for capitalized overhead, cash working capital, inflation and escalation on capital replacements/sustaining capital items and replace "unpaid time" by FEI employees with "paid time";

   c. The rate must Include a cost of debt rate based on an entity with a BBB rating with an additional premium to reflect the extra cost to arrange an incremental small debt issue; and

   d. The rate should provide for a maximum 50 bps premium above the benchmark Return on Equity or a lower negotiated equity premium.

The Delta SD Decision also deferred to the AES Inquiry the consideration of the respective definitions of AES and TES, if they are equivalent, and if TES constitute a separate class of service (Delta SD Decision, pp. 4, 79). Any reference to a thermal class of service in this decision is not intended to affect or prejudge the deliberations of the AES Inquiry in any way.

Other issues deferred to the AES Inquiry include the framework for FEI's activities in a competitive thermal energy market, and the degree of regulation required for discrete energy systems, which have natural competitive characteristics. (Delta SD Decision, p. 4)

6.0 PROPOSED BUSINESS MODEL

6.1 Service Description

FEI intends to provide thermal energy service to the Development by owning, operating and maintaining four geo-exchange LFS, one for each phase of the Development, and charging a rate to the Strata of the Development for the service. The Strata will own the mechanical equipment that causes the circulation of the fluid in each LFS, the heat pumps, natural gas boilers and related building infrastructure to provide space heating, cooling and domestic hot water. FEI notes that it is only responsible for providing thermal energy from the LFS, and is not responsible for the ownership, operation and maintenance of the mechanical room equipment, building loop or the in-suite heat pumps, nor acquiring the natural gas or electricity to operate the mechanical equipment. (Exhibit B-1, p. 6)

Construction of the first LFS was completed in the third quarter of 2009. The developer constructed the loop fields for the sole purpose of selling the assets to FEI (Exhibit B-8, BCUC 1.4.7). The in-service date was April 12, 2011 with occupancy as of April 28, 2011 when owners were able to occupy and utilize the utility service including energy provided by the LFS. FEI assumed ownership as of the effective date on the Purchase Agreement which was May 30, 2011 for the Phase 1 LFS (Exhibit B-8, BCUC 1.3.1 -1.3.4). No fees have been charged by FEI to date for the use of, and access to, the LFS. However, FEI states that the total cost of service for Phase 1, including carrying costs, are being accrued to the TESDA until rates are approved (Exhibit B-8, BCUC 1.14.3) (Exhibit B-1, p. 2).

6.2 Cost-of-Service Model

FEI indicates that it has designed the Rate according to a cost-of-service forecast model that conforms to the requirements of GT&C 12A, wherein it states that:

> "All applications by Customers for service using an alternative energy extension will be subject to review using a cost of service model. The cost of service model will determine the rate that a customer will pay for the service associated with the alternative energy extension. Service will be provided under the terms and conditions of the Service Agreement between FortisBC Energy and the Customer."

FEI indicates that each of the monthly Rates is designed to fully recover the cost of service for that phase. Therefore, the four monthly Rates cumulatively recover the cost of the service for all four phases in aggregate. The cost of service for each phase is primarily determined by the capital cost of the LFS and the ongoing maintenance costs.

6.2.1 Full Cost Recovery and TESDA

The proposed rate design is based on an approach whereby the rate is levelized over time while still ensuring that the Rates, in aggregate, will recover the cost of service over the term of the Service agreement. As such, the present value of the total revenues from each phase over the term of the contract equals the present value of the total cost of service over the same time period. FEI submits that the annual cost-of-service revenue requirements will display a downward trend over time due to depreciation of the rate base and if the rate was based on a traditional cost-of-service approach, energy costs at the beginning of the term will be higher and will decline over time. FEI further submits that this is not an attractive rate design for the developer and, as a result, FEI and the developer have agreed to levelize the cost of service in order to smooth out the rate over time. The levelized rate approach will allow FEI to charge a rate that is lower than the cost of service in the initial years and this same rate will then be higher than the cost of service in the latter years. FEI proposes to track the variances from the levelized rate in the TESDA with an "Internal Order Number." FEI states that the accumulated balance in the TESDA in respect of this Development will be zero at the end of the contract term. (Exhibit B-1, pp. 7-9)

FEI proposes to capture the variances between the calculated cost of service and the actual revenues from Rates in the TESDA by tracking revenues and costs relating to this project through an internal order number within the TESDA (Exhibit B-1, p. 9).

FEI indicates that there are three components to the Rate that will go towards reducing the balance in the overall TESDA over the life of the Service Agreement. These include FEI's development costs, recovery of overheads, and LFS maintenance costs. FEI states that to the extent that any of these costs exceed the actual costs, the excess will be used to reduce the TESDA (ExhibitB-8, BCUC 1.9.2). However, where the Rate recovered is less than any of these actual costs, the under collection would also be used to increase the TESDA. FEI confirms that any positive or negative variances accumulated by the Development will accrue to the TESDA during the term of the agreement and then be absorbed by other TES/AES customers in the future (Exhibit B-13, BCUC 2.7.1).

FEI further confirms that any sustaining capital expenses for the LFS outside of the warranty period, unexpected maintenance costs or any other items not currently anticipated and currently included in the current cost of service calculation will ultimately accrue to the TESDA for future treatment (Exhibit B-13, BCUC 2.7.1 and 2.11.1).

6.2.2 Monthly Rate

FEI seeks the Commission's approval for just and reasonable rates pursuant to sections 59-61 of the *UCA*.

FEI requests the Commission approve the proposed rate design and rates as set out in their Service Agreement with the Customer. The Rates proposed to be charged are intended to recover the cost of service relating to the ownership and operation of each LFS during the term of the Service Agreement. These Rates, defined as the "Monthly Fee," are shown in Schedule D of the Service Agreement:

Table 1: Monthly Fee

Phase 1:	$1,800 ($21,600 per year) plus applicable taxes
Phase 2:	$2,800 ($33,600 per year) plus applicable taxes
Phase 3:	$2,800 ($33,600 per year) plus applicable taxes
Phase 4:	$1,800 ($21,600 per year) plus applicable taxes

The Rates above are cumulative based on the number of LFS owned and operated by FEI at the time of billing. The Service Agreements also indicate that the monthly Rate will be increased annually by the greater of the percentage change during the preceding 12 months in Statistics Canada All Items Consumer Price Index for Vancouver and two percent. Further, the Rate is fixed and cannot be changed without the consent of all parties. FEI states that positive or negative variances accumulated by the Development will be absorbed by other TES/AES customers in the future. (Exhibit B-8, BCUC 1.14.4; Exhibit B-13, BCUC 2.7.1)

Given the four phases of development, the Service Agreement provides for a term of 25 years starting from the date that each particular phase is put into service and is subject to renewal or renegotiation at the end of that term. As such, there are four terms of the contract, each starting from their respective in-service date and lasting 25 years. At the end of the term, if no contract extensions are arranged, the Strata must purchase the LFS from FEI for a price equal to 20 percent of the initial purchase price paid by FEI, which is equal to the un-depreciated value of the asset.

6.2.3 Capital Costs and Rate Base

FEI has entered into a sales agreement with the developer for the purchase of four LFS. The predetermined price for each LFS is set out in the sales agreement as shown in Table 2 below.

FEI indicates that Phase 1 was based on the installed cost of the system for that phase and reflects the size of the LFS that has been engineered. The purchase price for LFS Phase 2 and 3 was calculated based on the cost of Phase 1 and adjusted to reflect the additional square footage of the buildings. The purchase price for LFS Phase 4 is the same as Phase 1 as both building sizes were identical.

With regard to the Phase 1 LFS, FEI has obtained a letter of opinion from a valuator indicating that a reasonable cost estimate for the LFS would be $196,000, which appears to be comparable to FEI's purchase price for Phase 1 (Exhibit B-13, BCUC 2.2.1).

The purchase price to be paid for each LFS, other than Phase 1, will be escalated each year by the greater of two percent or the average percentage change during the preceding 12 months in CPI (Exhibit B-8, 1.11.2). The total purchase price for the four LFS is $1.076 million before escalation.

Included in the capital costs of the LFS is FEI's project development cost of $107,600, which represents 10 percent of the purchase price of each LFS. FEI indicates the development costs related to this project are for activities spanning the period from early 2010 to completion of the fourth LFS (expected in 2015). As such, the total capital expenditures sought in the application include $1.076 million plus $107,600 for a total of $1.184 million (before any inflation adjustments). The following table is shown in the Application:

Table 2: Capital Expenditures for Which Acceptance is Being Sought

Rate Base Summary					
2011$	**Phase 1 LFS**	**Phase 2 LFS**	**Phase 3 LSF**	**Phase 4 LFS**	**Total**
Direct Capital (LFS Purchase Price)	$200,000	$338,000	$338,000	$200,000	$1,076,000
FEI Development Costs (capitalized)	$20,000	$33,800	$33,800	$20,000	$107,600
Total Addition to Rate Base	$220,000	$371,800	$371,800	$220,000	$1,183,600

(Exhibit B-1, p. 12)

FEI further states that it has adopted a 10 percent capitalization rate for many of its discrete geothermal projects to account for their development costs. These would include business development, accounting, engineering, legal, regulatory and a portion of corporate overheads. The 10 percent represents a proxy for the level of costs FEI is expected to incur for this project and

is not expected to be accurate for all projects (Exhibit B-8, BCUC 1.11.5). FEI indicates that development costs to date have been different for different projects and this is expected to continue going forward; however, as the thermal energy business becomes mature and FEI gains more experience, FEI expects that development and O&M costs will become more predictable (Exhibit B-8, BCUC 1.11.7). FEI later indicates that the 10 percent factor has been applied to other FEI/FAES [FortisBC Alternative Energy Services Inc.] projects and is generally representative of the development costs FEI expects to incur in order to bring an asset into operation (Exhibit B-13, BCUC 2.9.2). It should be noted that the Development is based on a fixed-price purchase contract for the LFS versus FEI's own construction costs, as may be the case for other FEI/FAES projects.

The 10 percent development cost is a transfer from the overall TESDA account to this project to account for overhead specific to this project (Exhibit B-13, BCUC 2.5.1).

6.2.4 Depreciation Expense

FEI indicates that the capital to be depreciated for all four LFS over the term of the contract is $968,400 (Exhibit B-1, p. 12). The proposed Rate is designed to recover this rate base amount of $968,400. The net rate base balance of $215,000, representing 20 percent of the initial purchase price, is determined to be the buy-out amount at the end of the 25-year term if the Service Agreement is not extended and corresponds to the remaining un-depreciated capital at the end of the contract (Exhibit B-8, BCUC 1.11.8). This buy-out clause is to ensure that the assets will not be stranded at the end of the contract term. In the event that the Service Agreement is extended, FEI will then design a rate to recover the balance of the rate base over the renewal period at that time (Exhibit B-1, pp. 12-13).

6.2.5 Operating and Maintenance Costs

FEI provides its forecast annual O&M expenses used for determining rates in Table 5 of the Application (reproduced below for each of the four phases).

Table 3: Maintenance Costs and Recovery of Overheads

	Maintenance Costs and Recovery of Overheads				
$2011	**Phase 1**	**Phase 2**	**Phase 3**	**Phase 4**	**Total**
Recovery of Overheads	$2,200	$2,200	$2,200	$2,200	$8,800
LFS Maintenance	$3,850	$4,999	$4,999	$3,756	$17,603
Total	$6,050	$7,199	$7,199	$5,956	$26,403

The above table includes ongoing overhead costs of $2,200 per year for each phase of the project. FEI states in Exhibit B-8, BCUC 1.13.3 that the O&M costs relate "solely to the operation and maintenance of the LFS. No, portion of this amount goes towards amortization of the TESDA." However, FEI's response to another IR (Exhibit B-13, BCUC 2.9.1) indicates that a large portion of the proposed overhead recovery for all four phases does, in fact, go towards an expense item labelled as "Misc/TESDA" (Exhibit B-13, BCUC 2.9.1). Equally, there appears to be conflicting evidence on whether or not a portion of the TESDA is recovered by this project.

Under the O&M Agreement, FEI will maintain the LFS in accordance with its design and requirements as established by the consulting Engineer and in a manner that ensures compatibility with components of the GSHP system. Further the O&M Agreement specifies LFS maintenance activities that FEI will be responsible for, including:

(a) Monitoring temperature of the thermal fluid;
(b) Monitoring and maintaining pH value of thermal fluid;
(c) Monitoring and maintaining proper volume of thermal fluid and the LFS;
(d) Maintaining the LFS in accordance with the installer's and engineer's operating and maintenance procedures and in accordance with good industry practice;
(e) Monitoring pressure in the LFS and taking remedial action if required;
(f) Biannual review of the DDC Controls provided FEI obtains access to said controls; and
(g) Repair of the LFS if required.

(Exhibit B-8, BCUC 1.8.1)

No major replacements are scheduled for the LFS during the term of the Service Agreement. The contractor provided a two-year warranty for the installation of the LFS and FEI points to the manufacturers and Plastic Pipe Institute information supporting an estimated life expectancy of the high-density polyethylene pipe of between 50 and 100 years. (Exhibit B-8, BCUC 1.12.1)

6.2.6 Escalation Factor

An annual inflation factor is included in the O&M Service Agreement, which applies to the rates charged to the Strata over the term of the Agreement. The monthly rate and the price to be paid for each LFS, other than for Phase 1, will be escalated each year by the greater of two percent or the rate of inflation as reported by Statistics Canada, All Items Consumer Price Index for Vancouver for the preceding 12 months. (Exhibit B1, Application p. 7, 11, and Exhibit B-8, BCUC 1.7.1 and BCUC 1.7.3)

6.2.7 Property Taxes

FEI explains that property taxes occur in two main categories. The first category of taxes is based on the assessed property value and mill rates. The second category is referred to as "In Lieu" tax that is levied by municipalities based on utility revenues collected within municipal boundaries. Generally, this is calculated at one percent of revenues in most BC municipalities. FEI confirms that it has estimated property taxes using an assumption that the one percent In Lieu property tax will be applicable and therefore has included an amount of approximately $200 per year in the cost-of-service calculation. (Exhibit B-8, BCUC 1.12.2)

FEI further states that in the future, the first category of taxes may be assessed against LFS. If so, FEI plans to recover the costs from the customer through an adjustment to the bill (Exhibit B-8, BCUC 1.12.2 and 1.12.3). FEI believes it is entirely appropriate to recover these taxes through a bill adjustment as it believes that it is in accordance with the LFS O&M Agreement and consistent with the tax deferral treatment of other FEI customers (Exhibit B-12, BCUC 2.8.1 and 2.8.2).

6.2.8 Income Taxes

FEI's financial model applies an income tax rate of 26.5 percent in 2011 and 25 percent thereafter. FEI also indicates that the geo-exchange system qualifies as a class 43.2 asset and therefore a Capital Cost Allowance rate of 50 percent is allowed. As such, this development produces a significant tax benefit in the early years of the project. (Exhibit B-1, p. 14-15 and Exhibit B-8, BCUC 1.12.4)

6.2.9 Rate Base and Earned Return

FEI believes that the appropriate rate of return for the Development is determined by using the following:

(a) a capital structure equivalent that of the benchmark utility;
(b) FEI's cost of debt in 2011; and
(c) a 50 bps equity risk premium over the benchmark ROE.

6.2.10 Regulatory Costs

FEI submits that some regulatory costs are accounted for in the capitalized project development costs, although doesn't provide a specific amount (BCUC 1.11.5, 2.12.1). It further states that the regulatory process for the Development has now reached almost 350 information requests (IRs), which exceeds the total IR count for three of the last four TES CPCN applications submitted by competitors of FEI, with the only exception being the FEI (now FAES) Delta SD CPCN which attracted over 800 IRs, and that it did not anticipate as comprehensive a proceeding as this for this application. FEI also maintains that many of the IRs are not specific to Tsawwassen Springs but rather are principle questions relating to provision of TES by FEI in particular and the responses will be consistent in future applications by FEI, which will reduce the costs of those applications and therefore should not be a cost borne entirely by the Strata (BCUC 2.12.1).

7.0 ISSUES AND DETERMINATIONS

In this section, the Panel examines a number of issues, including those concerning the orders sought by FEI:

- Approval of an Expenditure Schedule; and
- Approval of Rates and Rate Design,

in addition to issues that have arisen during the hearing.

7.1 Expenditure Schedule

Pursuant to section 44.2 of the Act, FEI is seeking acceptance of a capital expenditure schedule in the amount of $1.184 million for the LFS for the four phases of the Development.

Section 44.2 states that a public utility may file with the Commission an expenditure schedule containing a statement of capital expenditure the public utility has made or anticipates making during the period addressed by the schedule.

In considering whether to accept an expenditure schedule, the commission must consider whether the expenditures are:

a) consistent with the applicable British Columbia energy objectives;
b) consistent with the most recent long-term resource plan filed by the utility under section 44.1;
c) the extent to which the schedule is consistent with the applicable requirements under sections 6 and 19 of the *Clean Energy Act (CEA)*;
d) if the schedule includes expenditures on demand-side measures, whether the demand-side measures are cost-effective with the meaning prescribed by regulation, if any; and
e) consistent with interests of persons in British Columbia who receive or may receive service from the public utility.

Subject to the above considerations, the Commission must accept the expenditures if the Commission considers they would be in the public interest. The Commission may also reject or may accept or reject a part of an expenditure schedule based on its considerations.

FEI states that only a), b) and e) above are relevant to this Application. (FEI Final Submission, p. 3) The Panel will make determinations on each of these considerations, in addition to the public interest, in the following section.

7.1.1 Public Interest

In its public interest determination, the Commission must consider whether the expenditures are justified and reasonable and are in the interest of ratepayers. The amount requested includes FEI's direct capital (LFS purchase price) ($1,076,000), plus a 10 percent capitalization rate to cover FEI's development costs for the project ($107,600), which include overhead costs such as business development, accounting, engineering, legal, regulatory costs and a portion of corporate overhead. (Exhibit B-8 BCUC 1.11.5; Exhibit B-13, BCUC 2.5.3)

FEI justifies the purchase price for the LFS by referencing the Developer's cost report and a review letter provided by a third-party engineering consultant familiar with the design and installation costs of geo-exchange systems (Exhibit B-13, BCUC 2.2.1). Both references support that a reasonable price was paid for the work and materials for the Phase 1 LFS. The purchase prices for Phases 2, 3 and 4 were determined using the Phase 1 price, scaled by each of the phased development square footages. FEI will only pay for the LFS for Phases 2, 3, and 4 once:

1) the installation is complete;
2) the system has been inspected and an Assurance of Professional Field Review and Compliance has been provided by the professional engineer verifying the LFS has been installed as designed (Exhibit B-8, BCUC 1.19.2); and
3) FEI is satisfied "in its sole and absolute discretion, on or before the Closing Date, with the results of its technical, financial and legal Due Diligence." (Exhibit B-8, BCUC 1.19.6)

When asked who is responsible for the additional capital outlays if modifications to the remaining three LFS, based on the performance of the Phase 1 LFS, are required, FEI pointed to Article 3 of the Purchase Agreement that provides for additional changes to be made to the LFS at the Developer's cost. The relevant part of Article 3 is:

> "TGI may conduct inspections of such construction on reasonable notice to the Owner and where, acting reasonably, TGI deems it necessary after consultation with the Owner to make additions, repairs and alterations to any of the specifications for each GSHP System, including the Loop Field System, including all design and engineering components, for more efficient use and operation of each GSHP System, such additions, repairs or alterations shall be made by the Owner at the Owner's cost." (Exhibit B-8, BCUC 1.19.6)

Commission Determination

The Panel notes that none of the interveners raise any concerns regarding the cost, need or proposed public interest benefits such as GHG reductions. The CEC submits that the capital expenditures are in the public interest and should be accepted. (CEC Final Submission, p. 5) The BCSEA concludes that it supports the acceptance of the capital expenditure schedule. (BCSEA Final Submission, p. 6) Likewise, the Panel is satisfied that FEI has negotiated a reasonable purchase price for the LFS for Phase 1 and that FEI has adequately protected itself and its ratepayers by confirming the quality and performance of the LFS design and installation and that the expenditure is in the public interest. By extension, the purchase prices for Phase 2, 3 and 4 are also determined to be reasonable provided that FEI continues to exercise its due diligence in design review, inspection, testing and monitoring activities. **Accordingly, the Panel approves these expenditures of $1,076,000, plus 10 percent capitalization to cover FEI's development costs for the project ($107,600).**

7.1.2 Applicable Energy Objectives

The applicable British Columbia Energy Objectives are defined in section 2 of the *Clean Energy Act*. FEI states that the requested capital expenditures are for geo-exchange systems, which, in turn, advance British Columbia's energy objectives by:

- using innovative geothermal energy technology that supports energy conservation and efficiency through the use of a renewable resource;
- reducing BC's GHG emissions through the use of a renewable resource; and
- encouraging the switching from one kind of energy source or use to another that decreases GHGs in British Columbia.

FEI stated that "All of this will, in turn, benefit British Columbians in general, whether or not they currently receive services from FEI." This Application is consistent with the 2010 Long Term Resource Plan ("LTRP") filed by FEU as an application for a specific project that supports British Columbia's energy objectives as described above." (Exhibit B-1, p. 2)

In addition to the above FEI undertakings consistent with the *BC Clean Energy Act*, as part of the rezoning process, the developer has committed to "minimize GHG emissions and to save energy," along with a number of other sustainability commitments to the Corporation of Delta, through the use of "geothermal energy to heat and cool homes and buildings, as well as provide domestic hot water." (Exhibit B-8; BCUC 1.22.3; Attachment 22.3, p. 135) While not directly a part of this application, these are important in defining the broader Energy Policy Alignments of the Development and are documented in Schedule B of attachment 22.3 of the Application.

BCSEA supports Commission acceptance of FEI's capital expenditure schedule in relation to the Development in part because BCSEA believes this project supports the BC Energy Objectives set out in the *CEA*, in particular:

- To foster the use and development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean and renewable resources (*CEA s.*2(d));

- To reduce BC's GHGs (*CEA s.*2(g) – the Project is expected to reduce GHG emissions annually by 432 tonnes of C02e, compared to a business-as-usual case relying on high-efficiency gas boilers providing space and water heating.

(BCSEA Final Submission, p. 4)

7.1.2.1 Carbon and GHG Credits

BCUC 1.6.3 asked FEI what the GHG credits potentially resulting from this project are and who will receive the benefit from these GHG credits. FEI responded:

> "Since the Tsawwassen Springs development is new construction, the low GHG emission profile of this development will be in place from the outset. Determining what GHG emission credits might be available from the project would involve the analysis and study to develop a baseline emission comparator based on using conventional energy systems. In general a project such as the Tsawwassen Springs development would not be large enough on its own to justify going through the process of monetizing the credits. However, should a process be undertaken to realize the value of GHG emission credits the benefit will accrue to FEI as set out in the LFS Operating and Maintenance Agreement." (Exhibit B-8, BCUC 1.6.3)

Thus, while FEI does not anticipate gaining any Carbon Credits from the Development at this point, in response to BCUC 1.22.1 they provided the following data with regard to the development and the annual tCO2e saved assuming a business as usual (BAU) case consisting of a high efficiency gas boiler plant providing space heating and domestic water heating.

Table 4: Potential Annual tCO2e Saved

Building	Building Size Sq.Ft.	Number of Strata Units	Average Size Sq. Ft.	Estimated GHG Emission Reductions Compared to BAU Case (tCO2e)
Phase 1	67,900	55	1,235	85
Phase 2	105,500	93	1,134	132
Phase 3	105,500	93	1,134	132
Phase 4	67,900	55	1,235	85

Commission Determination

The Panel is persuaded that the benefits associated with this project's use of innovative geothermal energy technology supports energy conservation and efficiency through the use of a renewable resource as well as reducing BC's GHG emissions by an estimated 434 tCO_2e annually. **The Panel finds that the Project is generally consistent with British Columbia's energy objectives as outlined in the *CEA*.**

7.1.3 Long Term Resource Plan

FEI claim that this Application is consistent with its 2010 Long Term Resource Plan as an application for a specific project that supports British Columbia's energy objectives and also with the stated intention to initially apply for approval of rates on a project-by-project basis (Exhibit B-1, Application, p. 2).

Commission Determination

The Panel is satisfied that the application is consistent with FEI`s 2010 Long Term Resource Plan.

7.1.4 Interests of Persons who Receive or May Receive Service

In its Final Submission, FEI claims the Application is in the interests of persons in British Columbia who receive or may receive service from the public utility, namely the strata customer who will receive service "at a just and reasonable rate" and the City of Delta with whom the developer made a commitment to "use geothermal energy to heat and cool homes and buildings as well as providing domestic hot water" as part of the re-zoning requirements. (FEI Final Submission, p. 9)

BCSEA agrees that the Application is consistent with the interests of persons who will receive the thermal energy service from FEI and that the expenditure appears reasonable. (BCSEA Final Submission, p. 4)

With regard to the alignment of interests between the Strata and the developer, who built and sold the LFS to FEI and executed the O&M Agreement on behalf of the Strata, FEI acknowledges that it expects that the Developer wants to maximize its return at the time of sale, while the Strata may not share the same interests in this regard (Exhibit B-8, BCUC 1.23.5.1). The GSHP system as proposed, including the LFS, has met the requirements of the City of Delta's zoning for sustainability and should result in reduced GHG emissions compared to business as usual.

Commission Determination

In determining the interest of the people who receive or may receive service, the Panel considers the Strata owners and the Strata, which acts on behalf of those owners. The Panel has a number of concerns regarding whether the proposed rate they are charged is just and reasonable. However, this is discussed in more detail later in this Decision where the Panel provides direction on how shortcomings can be remedied. The Panel notes that the developer has negotiated the O&M Agreement with FEI with no input from the future Strata Council. However, this is a transaction done in the normal course of business for a developer prior to marketing the strata units and the Panel doesn't view this as necessarily a misalignment of interests. **The Panel finds that the project is in the interests of the parties that receive or may receive service.**

7.2 Rate Design and Rates

The panel identifies a number of issues with the rate design proposed by FEI, including:

(a) Is the proposed rate design an acceptable methodology under GT&C 12A?

(b) The potential assumption of financial risk, by other TES customers, for under recoveries by FEI from the Strata over the 25-year contract term of this contract.

(c) Given that the rate is essentially fixed for 25 years, how can the Strata's share of the TESDA amortization be recovered when it is determined at a future date?

(d) Is a rate levelized over 25 years appropriate?

When setting or approving rates, the Panel must apply sections 59 and 60 of the *UCA* which are reproduced in Appendix B. Section 60 allows the Commission to consider cost-of-service and other rate setting methodologies; to use any mechanism, formula or other method of setting the rate that it considers advisable; and to order that the rate derived from such a mechanism, formula or other method is to remain in effect for a specified period. Section 59(1)(a) provides that a public utility must not make, demand or receive an unjust, unreasonable, unduly discriminatory or unduly preferential rate for a service provided by it in British Columbia.

FEI submits that the rates charged are just and reasonable, as they recover the cost of service, as required by GT&C 12A, relating to the ownership and operation of each LFS during the Service Agreement (Exhibit B-1, p. 2). CEC views the rates as just and reasonable "… as they are based on reasonable cost estimates" (CEC Final Submission, p. 3). BCSEA submits that the constituent components of the proposed rates are reasonable (BCSEA Final Submission, p. 5). However, at issue here is the treatment of any unexpected under recoveries.

There is only limited provision to reopen this contracted rate over the 25-year term of the contract. FEI confirmed that while possible, the circumstances that will compel FEI to apply for an adjustment of the agreed fixed levelized rates are limited and FEI is not currently anticipating adjusting the rate during the contract term (FEI Final Submission, p. 13). FEI has also confirmed

that in the event of any variance between forecast and actual operating and maintenance costs, the rate to the Development will remain fixed, while any cost overruns or under recoveries accrue to the TESDA and FEI's other TES customers (Exhibit B-1, p. 9; Exhibit B-8, BCUC 1.13.6; Exhibit B-13, BCUC 2.7.1). FEI also submits that the rate it proposes to charge for this service is just and reasonable as it will recover the cost of service relating to the ownership and operation of each LFS during the term of the Service Agreement (Exhibit B-1, p. 2). FEI further submits that the Rates for this Project are designed based on cost-of-service principles and in accordance with GT&C 12A as it was in effect during 2010 and 2011 as a class of service of FEI (FEI Reply Submission, p. 5).

There is currently a balance of over $5 million in the TESDA. This amount represents overhead for specific thermal energy projects and the non-specific business development and marketing costs for the entire TES program. When asked if the Strata will contribute to recovering the balances in the TESDA, FEI outlined three components of the Rate that will reduce the balance in the TESDA over the life of the Service Agreement:

(a) FEI Development Costs. (Table 2 of Application) FEI has capitalized 10 percent of the LFS costs that will be amortized over the Service Agreement term to account for costs incurred to develop the project. To the extent the amortized amount exceeds the development costs recorded, the excess will be used to reduce the TESDA.

(b) Recovery of Overheads. (Table 5 of Application) FEI will recover $2,200 per phase per year ($8,800 for four phases) through the Rate over the term of the Service Agreement to account for ongoing costs incurred to manage the account. To the extent the $8,800 amount exceeds the ongoing costs incurred, the excess will be used to reduce the TESDA.

(c) LFS Maintenance. (Table 5 of Application) FEI will recover $17,603 per year for four phases through the Rate over the term of the Service Agreement to account for ongoing LFS maintenance costs. To the extent the $17,603 amount exceeds the ongoing maintenance costs, the excess will be used to reduce the TESDA. (Exhibit B-8, BCUC 1.9.1)

However, the potential exists for these costs to exceed the amount recovered and accordingly increase the balance in the TESDA. Thus, on the one hand, any shortfall in project revenue will increase the balance in the TESDA, for which although the FEI shareholder is ultimately responsible, the primary risk is to other TES/AES customers (Exhibit B-13, BCUC 2.3.1; BCUC 2.4.1; FEI Final Submission, p. 14). On the other hand, if actual costs prove to be less than the estimated costs, the TESDA will be reduced and other customers in the TES class of service will benefit. However, FEI submits that any variances are likely to be small (FEI Final Submission, p. 14) FEI further submits that the impact of the levelized rate design will result in a net impact of zero (all else equal) to the deferral account over the 25-year term (BCUC 2.3.1).

The contract does not contemplate a change in the rate as the result of a future rate design hearing that is intended to recover existing balances in the TESDA from FEI's TES customers. Neither does it contemplate a change in the rate upon the occurrence of an unexpected event such as the need for FEI to replace a loop field in the event of a catastrophic failure. FEI has confirmed that the capital costs necessary to ensure the LFS meets its design specifications outside the warranty period "… would be absorbed by FEI through the TESDA" (Exhibit B-13, BCUC 2.11.1). Direct project variances are not payable by the Development's customers at the end of the agreement term either (Exhibit B-13, BCUC 2.7.1.1).

The NSA in the FEI 2010-2011 RRA described the proposed New Energy Solutions Deferral Account, now referred to as the TESDA, as "an appropriate mechanism to address allocation issues as between TGI's gas customers and TGI's AES customers." (Order G-141-09, Appendix A, p. 8) While Order G-141-09 details the cost items to be recorded, and requires revenues from all AES/TES projects to be recorded within the TESDA, it also states that "any debit balance in the New Energy Solutions Deferral Account (TESDA) will not be recovered through natural gas rates and any credit balance will not be applied to reduce natural gas rates." The focus of that Order is clearly on tracking and minimizing the risk to the natural gas ratepayers. It does not specify any allocation methodology between FEI's different TES projects.

This application is the second AES or TES application that has been brought forward to the Commission since the TESDA was established in the 2010-2011 RRA. The parties to the 2010-2011 RRA NSA agreed that the deferral account would be recovered from AES customers. However, in this application, no specific portion of the O&M expense is related to amortization of the TESDA (Exhibit B-8, BCUC 1.13.3) or to the development costs of other abandoned projects. (Exhibit B-8, BCUC 1.13.4)

Corix argues that the TESDA is not designed to "defer individual direct projects costs" but "to recover the common costs of the FEI TES business from TES customers." According to Corix, the use of the TESDA would otherwise create "inter-generational and inter-project inequities between TES ratepayers" and would be inconsistent with the cost-of-service principles underlying GT&C 12A. Corix suggests a separate deferral account for this Project. While Corix acknowledges the variances are small in dollar amounts, it maintains that a principled approach is preferred. (Corix Final Submission, pp. 2, 5, 6) FEI argues that a separate deferral account is unnecessary as the TESDA tracks project-specific costs and revenues through the use of an internal order number specific to the Development. Such tracking enables FEI to determine the balance in the TESDA attributable to the Development at any point in time. (FEI Final Submission, p. 5)

BCSEA supports FEI's request that the recovery of the TESDA be dealt with in the separate application which FEI has proposed to make later in 2012, following the conclusion of the AES Inquiry, and with participation open to all TES ratepayers (BCSEA Final Submission, p. 5.) CEC agrees that any under recovery of revenues will accrue to the TESDA and be recovered from other TES customers, but is silent on whether it supports this approach. (CEC Final Submission, p. 4) In reply, FEI submits that FEI's use of the TESDA is consistent with Commission Order G-141-09, which approved the creation of the TESDA to capture the differences between costs and revenues of the TES class of service. (FEI Reply Submission, p. 4)

FEI states that the TESDA allocation model is intended to ensure consistency among TES projects "on a go-forward basis." FEI concludes that the "Tsawwassen Springs Project is a legacy project and the rate design under which FEI is providing service to Tsawwassen Springs is characteristic of

the service model at an earlier stage of the FEI development of TES and is not representative of the rate design and service model in recent and future FEI's projects." (FEI Final Reply Submission, p. 7)

However, the levelized fixed price rate model offered by FEI in this application contains few of the benefits cited in the Delta SD decision. (Delta SD Decision, March 9 2012, pp 81- 83) Specifically, while the Strata enjoys known and agreed-upon costs, it is other thermal ratepayers who bear the risk of any unexpected operational cost overruns, rather than FEI as the asset owner or the Strata as the customer. The TESDA is at risk for both capital shortfalls to meet the capacity specifications outside the warranty period, and operating shortfalls to maintain the LFS (Exhibit B-13, BCUC 2.11.1). These two factors serve to weaken any ability or incentive on the part of FEI to reduce costs, increase efficiency or enhance performance. FEI justifies this allocation of risk on the basis that:

- "…costs are prudently incurred and thus recoverable from customers";
- Order G-141-09 allows for the capture of variances between costs and revenues;
- TES customers will benefit from the development and growth of the TES class over time; and
- the nature of the levelized rate, which provides for early under recovery and later over recovery of costs. (Exhibit B-13, BCUC 2. 3.1, p. 4)

Finally, with respect to the issues that this feature of the rate design may raise for other TES customers and with respect to TESDA recovery in general, FEI submits that these issues and concerns should not prevent the approval of this project. FEI stated that it intends to provide a TESDA submission to the Commission later this year to address and outline a proposed methodology for allocating costs to specific projects. It further submits that any issues regarding TESDA recovery that concern other TES customers can and should be addressed in the context of that proposed filing. With this filing, FEI also plans to include a description of the current balance in the TESDA and a forecast of the TESDA recovery, including the Delta SD service impact on recovery, and the impacts of this project on that recovery. (FEI Final Submission, p. 14)

Commission Determination

The Proposed Rate Design and GT&C 12A

The Panel agrees with FEI that Commission Order G-141-09, which approved the creation of the TESDA, requires it to capture the differences between costs and revenues of the TES class of service in this account. However, it is the Panel`s view that the parties to the NSA that originally approved the TESDA did so primarily to effect a separation between the costs and revenues of the nascent TES business and those of the established natural gas distribution business. At page 9, the NSA states: "the [TESDA]… is an appropriate mechanism to address allocation issues as between TGI's gas customers and TGI's AES customers." The specific mechanism of the TESDA – to record all TES-associated revenues and costs – flowed from this need to establish separation. In this regard, the Panel notes that the same order that approved the TESDA also approved GT&C 12A, which provides that the cost of a specific project be recovered in the rates for that project. Further, on page 10, the NSA specifically states that "TGI will capture costs and revenues on a project specific basis."

FEI has brought this application under GT&C 12A. GT&C 12A requires that each thermal energy project be treated on a stand-alone basis, thus requiring recovery from the Strata of the costs of service to the Strata. These costs should include a fair share of the general TESDA costs. However, the proposed rate design appears to insulate the Strata from its proportionate share of any recovery. **Thus, the Panel finds that the proposed treatment of the TESDA in this application does not recover the cost of service as required by GT&C 12A.**

With regard to Cost of Service and GT&C 12A, the Panel notes that effective January 1, 2012, GT&C 12A was set as an interim tariff, pending the outcome of the AES Inquiry. At issue in the Inquiry is whether cost-of-service is an appropriate approach to rate design in the thermal services market, particularly the discrete thermal market. The Panel defers this decision on GT&C 12A and makes no determination on whether it should be modified or applied as-is on a permanent basis.

However, the Panel does consider that a key principle underlying GT&C 12A is applicable to this hearing, namely that each project should be stand-alone from an economic perspective.

Assumption of Risk by Other TES Customers

The contract between FEI and the Strata doesn't allow for recovery, from the Strata, of any unexpected costs incurred by FEI in the operation of the LFS. Such costs would be charged to the TESDA and recovered, through future TES rate designs, from other TES customers, *but not the Strata,* at an unspecified future date. The Panel acknowledges that over recoveries by FEI are treated in an identical fashion, and as such, in this circumstance, other TES customers could potentially benefit from any such over recovery by FEI from the Strata. However, this is not sufficient to persuade the Panel that this approach results in a rate that is not unjust, unreasonable, unduly discriminatory or unduly preferential as is required by section 59 of the *UCA*.

The Panel agrees with Corix that GT&C 12A requires a rate to be based on the cost of service for each individual alternative energy extension project. As such, it is a project-specific rate and does not contemplate a postage stamp rate that pools costs and revenues for all TES projects. In the Panel's view, costs that apply to all projects and that can't be easily directly allocated should be the only costs that continue to flow to the TESDA. However, the Panel notes that FEI is already mixing up the intended use of this deferral account by accruing project-specific costs such as engineering, legal, and regulatory costs within the TESDA and then allocating a portion out to each project as "project development costs." With the use of a robust cost allocation model, amounts accumulated in the TESDA should be largely limited to the business development costs of the Thermal Service program. Revenues that flow to the TESDA on a going-forward basis should be limited to amounts required to recover the TESDA balance that will be allocated to the TES customers by the future rate design hearing.

The Panel acknowledges the Development was brought forward under a different cost-of-service model than FEI uses or intends to use in other TES applications. However, FEI has provided no clear reason why customers of other thermal systems should pay for under recoveries for the LFS

maintenance, or benefit from project-specific over recoveries for that matter. There is no explicit provision in GT&C 12A for project-specific costs to be recoverable from other TES customers. In fact, this appears to the Panel to contradict the wording in the NSA cited above. The Panel also acknowledges that FEI can track the project costs within the TESDA, but finds that just the act of tracking in no way mitigates these cross subsidization issues.

The Panel finds that the proposed rate design, with direct project variances accruing to the TESDA and therefore other thermal customers, while small in dollar amounts, is not just, fair and reasonable. The Panel agrees with Corix that a principled approach is preferred and that a precedent must not be established. Accordingly, the Panel finds that other TES customers should not be placed at risk for any potential under recoveries or benefit from any over recoveries from the Strata. Therefore, **the Panel rejects the proposed rate design. However, if FEI proposes a rate design with a separate deferral account for this project, to account for any project-specific over or under recoveries, with any balances in this deferral account to be the responsibility of the Strata customer, the Panel would accept that rate design.** This non-rate base deferral account would be permitted to accrue interest calculated at the rate equal to its deemed cost of debt as directed in this Decision. **FEI is also directed to file an annual report to the Commission, by December 31 of each year, detailing the transactions and balances in this deferral account.**

Alternatively, the Panel would accept a rate design that essentially balances risk and reward in such a way that by assuming a risk for cost overruns, FEI can be provided with a potential reward in the event of cost savings. In the proposed rate design, the cost overrun risk is allocated not to FEI but to other (including future) TES customers. The Panel considers this to be a misallocation of risk. However**, if the shareholder assumed all the risks and benefits of under and over recoveries, the Panel is prepared to accept this departure from GT&C 12A.** This preserves the principle underlying GT&C 12A that the costs of a project should not be recovered from other TES ratepayers.

Contribution of the Strata to the Amortization of the TESDA

The Panel is of the view that the full TESDA balance should be recovered justly, fairly and reasonably from all TES customers and notes that FEI has indicated it will be bringing forward a rate design application later in 2012. However, due to the 25-year fixed nature of the rate with the Strata Council, it appears that it will be insulated from the results of this future rate design.

In the Delta SD decision, the Commission was concerned about the implications for the Delta SD that, as the only TES customer, it could potentially be responsible for the full amount of the TESDA. On page 60 of the Delta decision, the Commission stated: "By agreeing to this service, Delta SD is also responsible for an undetermined portion of the TESDA. FEI has provided no information on how this account will be recovered or over what period. The Panel notes that the current balance of this deferral account is over $5 million, still attracts additional costs, and if this Application is approved, Delta SD will be FEI's only TES customer." While this may be a potential risk for the Delta School Board, it is, in the Panel's view, a reasonable approach to recover the TESDA from all TES customers. Further, it is the approach agreed to by the parties to the 2010-2011 RRA when the TESDA was initially established.

However, this is in contrast to the approach taken in this application. While the Panel acknowledges that there is a possibility the project will contribute to some recovery of the balance in the TESDA, there is also a possibility that it will contribute to an increase in the balance. FEI recognized this with their submission that all else being equal, this project will have a net impact of zero on the TESDA. There is no other proposed mechanism to recover, from the Strata, any proportionate share of the pre-project balances in the TESDA. The Panel is of the view that the possibility of a suitable recovery of shared costs is not a substitute for an explicit allocation for the express purpose of doing so.

The Panel acknowledges that a future rate design hearing is a more appropriate forum to determine how balances in the TESDA are to be allocated. Accordingly, this Panel makes no specific determinations on recovery of any amounts from the TESDA for other existing or future

thermal customers. However, as previously discussed, the Panel is concerned that there will be no amortization of the TESDA overhead recovered from the Strata. **Accordingly, the Panel directs FEI to propose an allocation methodology, for approval by the Commission, that can be applied on an interim basis, until a future hearing establishes a permanent allocation. This allocation can be a percentage of the balance in the TESDA, a percentage of the Strata's monthly rate or any other methodology that FEI can demonstrate to be just and reasonable.**

Levelized Rates

The Panel has concerns with regard to the submission by FEI that the rates have been levelized – smoothed over the course of the 25-year contract – to provide a more attractive rate design for the developer. The levelization amounts to a shifting of costs from the initial Strata unit owners to Strata unit owners as much as 25 years hence. Given the amount of time the rate will be levelized over, this raises an issue of intergenerational equity. There may be some justification to this approach since, as FEI submits, the amortization costs are higher upfront, thereby increasing the costs for the initial Strata owners. However, the later Strata owners are contractually obligated to pay FEI for the un-depreciated portion of the LFS at the end of the 25-year term. In addition, if there was deterioration of the LFS itself, or the thermal field it draws from, and if this manifests itself later in the term, in a cost-of-service model, the costs to remedy would be borne by future ratepayers even though the earlier ratepayers are the beneficiaries. The Panel feels that this last concern is of low probability and further is completely mitigated by the deferral account, or the assumption of risk for variances by the shareholder, that was previously directed.

The Panel recognizes that the customer is actually the Strata, not the individual unit owners, so, in that respect, there is no shift of costs from one entity to another. In addition, the Panel recognizes that the levelization also shifts some cost savings from the Capital Cost Allowance recovery from the initial year to future years. However, the Panel questions the justification for shifting costs from the present to so far into the future. Lower rates may indeed be more attractive to the developer and will in all likelihood also be more attractive for the members of the initial Strata, but the Panel finds this to be insufficient justification for levelization. However, the Panel is prepared

to accept a levelized rate in a rate design in which FEI accepts the risk and rewards for under and over recoveries. This would be consistent with the intent of a firm "cost-based" 25-year contract rate. Otherwise, the Panel would accept a rate that is levelized over shorter periods. **In the event that FEI does not accept the risks and rewards of the project, FEI is directed to submit, to the Commission for approval, a plan for a series of shorter periods as the basis for levelized rates.**

Costs Incurred to Date

FEI accepted ownership of the first LFS approximately one year prior to the date this application was filed. The LFS has been providing thermal energy during this period. FEI has stated that the costs – amortization and O&M – have not been charged to the customer, but have accrued in the TESDA. Section 61(3) of the *UCA* states: *The rates in schedules as filed and as amended in accordance with this Act and the regulations are the only lawful, enforceable and collectable rates of the public utility filing them, and no other rate may be collected, charged or enforced.* Accordingly, the Panel finds these expenditures for regulated thermal services, are not eligible for recovery in rates from any customer – be it the Strata or other thermal energy customers. **Accordingly, FEI is directed to remove any amounts related to the cost of provision of service to date from the TESDA and propose a treatment of those costs that is not unfair and unjust to any existing thermal energy customer, including the Tsawwassen Springs Strata.**

Regulatory Costs

FEI has indicated that some regulatory costs are included in the capitalized overhead and thus will be recovered through the Rate. However, the actual cost of this hearing will in all likelihood exceed that amount. With regard to FEI's argument that it is not appropriate that the Strata bear the full cost of this hearing, the Panel agrees. However, the Panel does not necessarily agree that many of the questions are principle questions relating to provision of TES by FEI in particular. It appears to the Panel that many of the questions are related to the operation of the TESDA and GT&C 12A, both of which were established by agreement between FEI and various interveners over two years ago. However, the Panel does agree that the responses will be consistent in future thermal energy

service applications by FEI. Therefore the Panel finds that the regulatory cost should not be borne by FEI's natural gas ratepayers. **The Panel directs FEI to propose a reasonable estimate of the cost of this hearing and propose an allocation to the Strata for approval by the Commission. The balance of the costs should be charged to the TESDA as a non project-specific expense to be borne by all thermal energy customers.**

7.3 Service from a Separate Entity

The Panel has previously raised a concern that costs are properly segregated between the natural gas distribution business and the thermal energy business. To this end, adequate controls should be in place to prevent any cross subsidization.

In calling for greater separation for the Delta SD class of service, the Commission directed that the Delta SD service was to be provided by a separate corporate entity. As cited in the AES Inquiry and quoted on page 91 of the Delta SD Decision: "Rules that rely more on separation, and less on cost accounting solely, can minimize the likelihood of abuses. At the same time, rules that rely on separation are easier to monitor than rules that primarily rely on a multitude of reporting requirements." The Delta SD Decision also noted that **"**the Delta SD class as currently structured cannot be considered to be sufficiently self-contained to reduce the possibility of cross-subsidization from or risk to the natural gas ratepayer, and does not allow for an objective allocation of costs."(Delta SD Decision, p. 97) The use of the Transfer Pricing Policy (TPP) was an immediate, short-term solution to the problem. However, the Panel indicated that a longer-term solution to reducing the possibility of cross-subsidization would require greater operational separation and directed a transition to a more stand-alone service organization within 30 days, pending the outcome of the AES inquiry.

FEI subsequently assigned the Delta SD project to FAES, an affiliate of FEI, and stated its intention to use the existing TPP excluding the overhead charge and facilities fee as a basis for the cross charges between FEI and FAES. However, the Commission was not convinced that the current TPP is appropriate for cross charges between FEI and FAES. It noted that FAES was not providing

regulated services at the time of the FEU 2012-2013 RRA Decision, which accepted the continued use of the TPP for cross charges between FEU and FortisBC Inc. FAES differs from the regulated entities to which the TPP was to be applied as contemplated in the 2012-2013 RRA in a number of fundamental ways, including the number of customers, the nature of the contracts with these customers and the nature of the operations. In addition, FAES contains business activities and assets that are not currently regulated. It further noted that, unlike FEI and FortisBC Inc., FAES is not a stand-alone entity and, as such, relies on intercompany transfers to function. (Order G-71-12, Appendix A, pp 3-4)

FAES stated on page 3 of its recent submission for an approval of a CPCN for PCI-Marine:

> "On March 9, 2012, the Commission issued the Delta School District Decision (the "DSD Decision"), Commission Order No. G-31-12. The DSD Decision granted a CPCN for the project on the condition that agreements that FortisBC Energy Inc. ("FEI"), had with the Delta School District ("DSD") were to be assigned to an affiliate of FEI. The Commission made it clear that the DSD Decision was not intended to be precedent setting or to become a template for future thermal energy system projects, and that the decision was not in any way intended to predetermine the issues being addressed in the ongoing Alternative Energy Solutions Inquiry ("AES Inquiry"), including the issue of what corporate structure FEI should employ for its TES class of service. The Commission's DSD Decision acknowledged that the AES Inquiry will determine where the DSD service will ultimately reside:
>
> In the longer term, with the benefit of the AES Inquiry outcome, FEI will have a better understanding of its AES and TES services, the degree of their regulation and the preferred form of corporate structure. This knowledge will determine under what corporate structure the Delta SD service will ultimately reside.
>
> The Commission further acknowledged that various related issues, such as FEI's recovery of the thermal energy system deferral account balance, would also have to be addressed in the AES Inquiry.
>
> This Project was originally intended to be carried out by FEI, and as a result, all of the project development activities have been carried out to date by FEI. In light of the DSD Decision, FEI has decided to bring this Application forward under FAES pending the outcome of the AES Inquiry. Should the Commission approve the provision of thermal energy service by FEI as a class of service, then FEI and FAES may assign the service from FAES to FEI. The service contracts enable FAES to assign the contracts to a regulated affiliate of FAES without the consent of the customer."

In this application, FEI confirms that both Tsawwassen Springs contracts include provisions which allow assignment to an affiliate (Exhibit B-8, BCUC 1.4.9).

Commission Determination

The Panel finds that where cross-subsidization is a concern, greater operational separation is desired or even required to protect the interests of all ratepayers. While cost allocation remains a concern irrespective of the final corporate structure, the amount of cost allocation required is reduced, depending on the degree of operational separation. In this regard, the Panel notes that assignment to a separate legal entity is by itself insufficient to eliminate concerns about cross-subsidization. However, an assignment to a separate entity does go a long way to alleviating these concerns. This was the approach taken by the Commission in the Delta decision and the Panel finds that nothing has changed since then that would persuade it that this approach shouldn`t be taken in the current application, pending the outcome of the AES Inquiry.

Pending the outcome of the Inquiry, the Panel directs FEI to assign, on an interim basis, the Development to a separate affiliate, such as FAES, within 45 days of the date of this decision. FEI is further directed to provide proof of this assignment to the Commission.

7.4 Competition in the TES Market

In the Delta proceeding, FEI characterized thermal energy services as regulated services provided in the presence of a competitive market. For example, interveners have highlighted the differences from the traditional regulated gas operations (Delta SD Decision, p. 18). In this hearing, FEI has confirmed that the design, construction and operation of LFS is a competitive service, with many potential providers currently operating in BC (Exhibit B-8, BCUC 1.2.2) and the presence of market competition (Exhibit B-11, CEC 1.9.1).

Thus, FEI is not the only entity that can provide the necessary management and financing skills to the Development. Although the Developer did not use a competitive bidding process to select FEI to own and operate the LFS, it was free to contract with a different party for this service (Exhibit B-8, BCUC 1.2.3, p. 4). The Developer oversaw the initial design, development and construction of the LFS including the thermal design specifications (Exhibit B-8, BCUC 1.4.1). The main services provided by FEI to the Strata are ongoing asset operation and management, and a financing arrangement which allows the Developer to price the residential units more competitively. The actual monitoring and management operations are largely contracted out, with FEI playing primarily a project-management and customer-care role (Exhibit B-1, p. 14; Exhibit B-8, BCUC 1.8.2).

As previously discussed, the Commission is obliged to use its regulatory mandate to ensure that rates are fair and reasonable. Where a natural monopoly service is potentially impacted by a regulated competitive activity, just and reasonable rates should ensure that there is no cross-subsidization by the customers of the natural monopoly. In the Delta SD Proceeding, the Commission relied on the following regulatory principle, among others:

> A competitive service provider who is also a natural monopoly service provider requires active Commission oversight to reduce the potential for cross-subsidization between the competitive service and the natural monopoly service. (Delta SD Decision, p. 23)

Corix argues that the deferral of direct Development costs to the TESDA and recovering them from future customers on other projects distorts the competitive TES market in the interim, by artificially lowering the Application's project rates. (Corix Final Submission, p. 2) However, no specific evidence was presented with regard to the impact on the market of this deferral treatment.

The issue of timely recovery of existing balances in the TESDA was raised by intervener Corix, who has a "…direct and substantial interest in how the Commission regulates TES projects." It submits that FEI's TES model should not be implemented until a methodology applicable to recovery of TESDA has been approved. It further submits that the "…piecemeal roll-out of FEI`s TES strategy

should be stopped so that it can be clearly understood and tested." (Corix, Final Submission, pp. 1, 5-6)

Corix submits that it had objected in earlier proceedings to FEI's use of the TESDA to shield its shareholders from any TES business development risk. According to Corix, the TESDA defers the costs to buy market share at the ultimate expense of future TES customers, that other TES providers do not have this opportunity and their shareholders must bear the cost of business development themselves. It then submits that in this hearing, FEI is seeking to extend the role of the TESDA to defer upfront direct costs associated with a specific project for recovery from future customers on other projects. Further, Corix interprets this as a step towards a broader TES postage stamp rate and a step away from project-specific cost-of-service rates, and therefore inconsistent with GT&C 12A. It asserts that this enables FEI to offer lower priced service by deferring direct project costs to future TES customers. (Corix Final Submission, pp. 1-2)

Commission Discussion

FEI's natural gas distribution business is a "natural monopoly," which means the physical and other characteristics of the business environment lead to certain economic efficiencies if there is only one provider. However, few or none of the benefits of a free market apply to this business model. Typically, regulation is the mechanism that is imposed as a substitute for these benefits. In contrast, the discrete thermal energy service business has no such natural monopolistic characteristics. There is no physical or business reason why there should be only one, or even a limited number of providers of services in this market. There could potentially be as many service providers as there are facilities requiring heat, cooling and/or hot water. Nevertheless, the thermal energy services are regulated, not because it is a natural monopoly, but because it fits the definition of a utility requiring regulation under the *UCA.*

Because the thermal energy service market is regulated, the Commission must ensure that rates charged in that market are just, fair and reasonable. It is in part through this mechanism that the thermal energy marketplace can remain competitive, even though regulated. In the natural gas

distribution business there is merit to sharing costs among all customers in a service class as all customers are connected and share the benefits mutually. However, in the world of distinct, separate thermal energy projects this is not necessarily the case. In the Panel's view, each project should be managed on the basis of complete economic separation from other projects. Each project is expected to recover its own direct costs, along with its fair proportionate share of indirect costs, while providing the utility with an opportunity to earn a fair return on capital deployed. This economic separation by project is the basis of GT&C 12A. As an illustration, paragraph A of GT&C 12A states: "All applications by Customers for service using an alternative energy extension will be subject to review using a cost of service model. The cost of service model will determine the rate that a customer will pay for the service associated with the alternative energy extension." In the Panel's view, GT&C 12A is an unambiguous statement that the Commission has approved the principle of economic separation for each thermal energy project.

The requirement that each project recover its associated costs only from its own customer base is important to the operation of the market in a regulated, non-natural monopoly environment, and to ensuring that customers are faced with prices which promote efficient investment decisions – if shareholders wish to subsidize rates, that would be acceptable. If costs can be shifted from one project to another, a provider could potentially adjust rates in such a manner that could enable it to target its competitors on a project-by-project basis. This practice may be acceptable in a non-regulated market, where, generally speaking, providers can charge what they want, when they want, to whomever they want. However, in the regulated thermal services market, the Commission is responsible for ensuring that the rates charged are just, fair and not discriminatory.

The Panel has previously discussed the issue of cross subsidization of the TES business by the natural gas distribution customers and it is the Panel's view that the TESDA and GT&C 12A were established, at least in part, to prevent this. The TESDA ensures that all costs that are associated with the thermal energy business, but not to a specific customer, are captured and segregated from the natural gas distribution business, while GT&C 12A requires all specific TES project-related costs to be recovered from specific TES customers.

Accordingly, the Panel's primary concerns relating to competition in this application is how effective are the mechanisms that FEI has in place for operational separation to ensure that the costs associated with the provision of TES are not subsidized by either FEI's distribution customers or by other TES customers. The Panel notes that the previous direction to FEI to assign the contracts to a separate company is accompanied by a longer term direction to increase the degree of operational separation.

Corix submits that it considers FEI's use of the TESDA to defer business development costs unfairly shields FEI's shareholders from risk. The Panel makes no determination on this issue. However, it is essential, in the Panel's view, that balances in the TESDA be recovered in a fair and timely manner from all thermal customers to prevent cross subsidization of some TES customers and not others.

With regard to the timely recovery of program start-up costs, the Panel is of the opinion that amortization of TESDA overheads should not be postponed any longer than necessary. The longer the recovery is postponed, the greater the uncertainty in the TES marketplace. To that end, the Panel notes Corix`s submission that postponing the approval of an allocation methodology amounts to implementing FEI`s TES model in a piecemeal fashion. FEI has committed to a rate design hearing "in the summer of 2012." The Panel finds this encouraging, but in the meantime, because each project`s share of the TESDA has not yet been determined, it is impossible to know upfront what the full cost of any TES project actually is. Accordingly, the Panel is not persuaded that a fixed price contract, even with an escalation clause, to define a cost-of-service based rate, is appropriate for a TES project at this time. In this regard, the Panel has previously directed FEI to propose an interim allocation methodology to determine the just and fair portion of the TESDA that should be recovered in the rates for this project.

7.5 Operating and Maintenance Agreement

The signatories to the LFS O&M Agreement contract are FEI and the Developer. The Developer is the beneficial owner of the lands and will be the first member of the Strata for the development. The Developer agrees to assign the O&M Agreement and the obligations under this agreement to the Strata upon its formation.

FEI states that there are no explicit guarantees contained in the O&M Agreement. Section 4.1 specifies that FEI will maintain the LFS in accordance with its design and requirements as established by the consulting Engineer and in a manner that ensures compatibility with components of the GSHP system. FEI was asked to clarify what its legal and contractual obligations are, in the event that the design capacity of the LFS equates to, for example, only 45 percent of the Strata's actual annual energy demand. FEI responded that it has an obligation to provide access to the design capacity of the LFS on demand. (BCUC 1.3.7, BCUC 2.13.7.1)

When asked how it is monitoring the thermal performance of the LFS, FEI stated that it is monitoring thermal performance of the LFS by collecting supply and return temperatures as well as the pressure of thermal fluid and that based on the collected data FEI will be able to determine any LFS performance issues. FEI further responded that Schedule C of the O&M Agreement specifies the activities that FEI will carry out in its operation of the LFS. These include:

- Monitoring temperature of the thermal fluid;
- Monitoring and maintaining pH value of thermal fluid;
- Monitoring and maintaining proper volume of thermal fluid in the LFS;
- Maintaining the LFS in accordance with the installer's and engineer's operation and maintenance procedures and in accordance with good industry practice;
- Monitoring pressure in the loop field system and taking remedial action if required; and
- Biannual review of DDC Controls provided TGI obtains access to said controls.

Commission Determination

Strata corporations are common today, are required to retain the necessary expertise to fulfill their legal obligations, and these obligation are conveyed to all purchasers of units as part of a strata purchase agreement. FEI and its subsidiaries have significant experience in the utility and TES field. The developer is an established company, well versed in building and selling strata units. Accordingly, the Panel is of the opinion that the parties to the agreements are of sufficient sophistication and are capable of making contracts of the nature of those presented here. However, an issue of concern to the Panel relates to the measurements required to determine if FEI has met its obligations under the O&M Agreement.

FEI states that it is responsible for ensuring that the LFS delivers the amount of energy for which it was designed, even though the Strata pays a flat monthly fee for the energy. If the LFS fails to deliver the design amount on demand, FEI must rectify the situation at its own cost. However, FEI has not provided any evidence that it is actually monitoring the amount of thermal energy delivered. It is monitoring a number of parameters associated with the LFS, but has provided no evidence that an accurate account of the energy delivered can be derived from these readings.

The Panel is concerned about the potential for dispute and conflict that the lack of this information gives rise to. Given that any deficiencies in the thermal output of the LFS would be made up by additional energy provided by the peaking boilers, any dispute would, in the Panel's view, most likely arise when the Strata becomes aware of this through a higher natural gas bill. However, it appears to the Panel that neither FEI nor the Strata will have any way of knowing, on a day to day basis, whether the LFS is providing the energy it is designed to provide. If this is the case, it is equivalent to supplying a natural gas commodity to a distribution customer, but metering only the delivery pressure and not the volume of gas delivered. There would be no way to know how much of the commodity has been supplied. In the case of the thermal energy delivered by the LFS, it appears to the Panel this issue could be remedied by explicitly monitoring the thermal energy output of the LFS.

The Panel directs FEI, within 45 days of the date of this decision, to provide an explanation of how the amount of thermal energy delivered by the LFS can be determined. In the absence of such an explanation, the Panel directs FEI to provide a proposal of how the thermal energy output can be measured and the thermal performance of the LFS communicated to the Strata.

The Panel also notes that a means of accounting for thermal energy delivered may also be necessary to allow the Commission to fairly allocate regulatory costs to utilities.

7.6 Financing Costs

The costs of financing the Development are dependent on (a) a Commission-approved capital structure for this Project, (b) the allowed ROE, and (c) the deemed cost of financing the debt component of its capital structure. This section will in turn address the business risks associated with this Project, the capital structure, the rate of return on equity and the cost of debt.

7.6.1 Project Risks

Generally, FEI considers the TES business to be higher risk than FEI's natural gas class of service and references the "Opinion of Kathleen C. McShane – Equity Risk Premium for the Thermal Energy Service" (Opinion of Ms. McShane), to support this view (Exhibit B-13, BCUC 2.24.6). In her Opinion, Ms. McShane provides a summary of those risks and submits that "the higher business risks of the TES class of service relative to the benchmark utility reflects the combination of:

(1) Its greenfield characteristics, including its lack of established customer base;
(2) Relatively high upfront capital costs that must be recovered from TES customers only;
(3) Competition from conventional sources of energy;
(4) Competition from other providers of TES services;
(5) Reliance on less established technologies to provide the service;
(6) Small size of individual TES projects, e.g., fewer customers to recover the costs of the assets constructed and operated to serve them; and

(7) Reliance on non-traditional rate structures to make the TES projects competitive and provide an opportunity to recover the related investment."

(Exhibit B-1, Appendix D, Opinion of Ms. McShane, p. 5)

In addition, Ms. McShane submits that the higher business risk of the TES class of service relative to the principal business of FEI, the benchmark utility, results in a higher cost of capital, which needs to be reflected in a higher allowed return. Since the financial risks are similar (i.e., same capital structures), the cost of equity for the TES will be higher than the benchmark utility cost of equity. In that case, a fair allowed ROE for the TES requires an incremental equity risk premium above the benchmark utility allowed ROE.

In the Development, FEI is only responsible for the LFS and is not responsible for the ownership, operation and maintenance of the mechanical room equipment, building loop or the in-suite heat pumps. The following table presents FEI's assessment of the risk profile for each component of the geo-exchange system.

Table 5: Geo-Exchange Component Risk Profile

System Description	Technological Challenge Level	Operating Cost Impact	Overall Risk Factor
Loop Field System (LFS)	**Very Low** Relatively simple system that consists of high density polyethylene pipe. Not prone to failure.	**Low** cost associated with monitoring, thermal fluid maintenance and emergency response when required. Low probability of failure	**Low**
Central Mechanical Equipment	**Medium-High** Complex mechanical system consisting of number of components. Rotating equipment prone to failure	**Medium-High** Annual maintenance and operations cost. Depending on level of preventative maintenance there a potential of equipment failure leading to high operating cost	**Medium-High**
In Suite Heat Pumps	**Medium** Proven technology not usually prone to failure	**Low-Medium** Annual maintenance cost. Depending on level of preventative maintenance there a potential of equipment failure leading to increase in operating cost	**Low -Medium**

(Source: Exhibit B-8, BCUC 1.10.1)

FEI views the physical risk of the system as being very low. For this reason, it has not allowed for any LFS sustaining or replacement capital additions in the 25-year contract period (Exhibit B-8, BCUC 1.11.10). Should any capital costs be necessary to ensure the LFS meets its design specification outside the warranty period, FEI confirmed that it would absorb these costs through the TESDA (Exhibit B-13, BCUC 2.11.1).

In addition, FEI describes the project-specific business risks as follows:

(a) Risk of damage to or failure of the LFS from equipment failures, natural causes, catastrophic events (e.g., earthquakes) or third-party actions.

(b) Impact to unit holders – Contract with single customer - the Strata, but many unit holders are impacted by the service.

(c) Changes in the cost of service relative to the forecast used for rate setting driven by items such as:

- Maintenance or repair costs,
- Administration expenses,
- Financing costs,
- Income Tax or Property tax changes, and
- Other cost of service items.

(d) Regulatory Risk – rate and capital expenditure schedule requires Commission approval.

(Exhibit B-8, BCUC 1.23.3)

When asked to clarify risk (b) above, FEI indicated that this risk is relevant because the effective price and service levels that the unit holders receive are affected by factors that are outside of FEI's control, as the Strata owns and operates the GSHP system while FEI only owns and operates the LFS (Exhibit B-13, BCUC 2.18.3).

Regarding risk (c) above, FEI confirms that it views this as a business risk to FEI because any shortfall in revenues would increase the balance in the TESDA, which the FEI shareholder is ultimately responsible for (Exhibit B-13, BCUC 2.18.4). Therefore, FEI would only be responsible for the TESDA in the event that there were no TES/AES customer or that the revenue generated from TES/AES customers is insufficient to recover the balance (Exhibit B-13, BCUC 2.4.1 and BCUC 2.4.2).

FEI has also taken numerous steps to eliminate or mitigate business risks associated with this Project. In terms of construction cost risks, the purchase prices for the Phases 2 to 4 LFS are fixed but for the two percent annual escalation factor and any cost differential between actual LFS construction costs and the fixed LFS purchase prices are borne by the Developer (Exhibit B-8, BCUC 1.5.4). In other words, the Rate is largely immune to capital cost pressure (Exhibit B-8, BCUC 1.7.2). Moreover, FEI indicates that it will not assume commodity price risk (Exhibit B-8, BCUC 1.10.2) and that the risk of not collecting the Rate if Strata lot sales are slower than expected is small because the Developer must pay the Strata fees that are assigned to unsold units until the units are sold (Exhibit B-8, BCUC 1.16.6). Also, once FEI has paid for the LFS, regardless of whether Strata lots become unoccupied in the future, the obligation of the legal owner to pay Strata fees will always remain. If Strata fees are not paid to the Strata, the latter has the ability to place a lien on the property in respect of amounts outstanding as set out in the *Strata Property Act* (Exhibit B-13, BCUC 2.17.2). In terms of utilization risk, FEI notes that this risk falls to the Strata title holders given that the Rates are payable to FEI even if the Strata title holders do not utilize the capacity of the LFS at all (Exhibit B-8, BCUC 1.19.1).

If the Developer is financially incapable of constructing the LFS and by extension the condominium units, FEI will not have any financial loss – other than lost opportunity cost – as FEI will not have made any payment, nor hold any legal obligation, to the Developer for the LFS not yet constructed. If the LFS and condominium development is completed by a financial receiver acting for the lender, FEI would complete the purchase of the LFS provided the Conditions Precedent of Article 10 of the Purchase Agreement are satisfied; namely that the LFS is operationally sound and has received the Assurance of Professional Field Review and Compliance, the condominium has been granted an occupancy permit, the architect has provided a letter assuring substantial completion of the building and there are a sufficient number of home owners (Exhibit B-8, BCUC 1.3.9). In case FEI were concerned about the possibility of an under collection of Strata fees, FEI would withhold payment to the Developer pursuant to Section 10.1 (g) of the Agreement stating “FortisBC being satisfied, in its sole and absolute discretion, on or before the Closing Date, with the results of its technical, financial and legal Due Diligence.”

Commission Determination

The Panel notes that FEI has taken numerous steps to mitigate risk. With regard to risk (b), the Panel disagrees with FEI. These risks are not those of FEI but those of individual Strata title holders – risks that the latter would have willingly undertaken. The Panel is of the view that FEI, apart from the obligation to maintain the system in accord with the O&M Agreement, is totally passive in this aspect of risk.

Regarding risk (c), the Panel notes that FEI intends to first amortize the TESDA to TES/AES customers before the shareholders would hold any responsibility for the balance in the TESDA. However, the Panel is of the opinion that its directive to create a separate deferral account for this Project would change the risk borne by the shareholder, as any balance in this variance account would be the responsibility of the shareholder.

The Panel also notes that FEI adopted an approach that ensures assets will not be stranded at the end of the 25-year contract term, with respect to each phase of the Development. Indeed, as discussed previously, if the Service Agreement is not extended, the Strata must purchase the LFS from FEI for a price equal to 20 percent of the initial purchase price paid by FEI, which corresponds to the remaining un-depreciated capital at the end of the contract.

Finally, the Panel is satisfied that there will be no ongoing risk to FEI related to the financial state of the Developer.

Accordingly, the Panel is satisfied that FEI has included the necessary provisions in the Agreements to either eliminate or mitigate the business risks associated with this model of providing thermal energy services to the Development.

7.6.2 Capital Structure

FEI proposes a 60/40 debt equity split to be applied to the capital structure of the Development. FEI notes that such capital structure is the same as has been approved for the benchmark utility, which is FEI's natural gas class of service, and for the Delta School District Project, Corix's UniverCity, Dockside Green and River District projects. FEI submits that the proposed capital structure should be approved as it is consistent with all other TES projects approved to date and because there is no reason to depart from this structure for this application (FEI Final Submission, pp. 11-12). FEI acknowledges that it is possible to arrive at alternate combinations of debt and equity and their attendant rates relative to the benchmark utility (Exhibit B-1, Appendix D, FEI Supplemental Evidence, p. 8).

While the BCSEA and CEC note, in their respective final submissions, that FEI proposes a 60/40 debt equity structure equivalent to that of the benchmark utility and all other TES projects approved to date by the Commission, they do not take a position on the proposed capital structure. (BCSEA Final Submission, p. 5) (CEC Final Submission, p. 4)

Commission Determination

The Commission Panel agrees with FEI that it is possible to arrive at alternative combinations of debt and equity and the attendant rate of ROE relative to the benchmark utility. In practice, the Commission has varied both the capital structure and the ROE in the calculation of rates for the utilities it regulates. In determining the capital structure of the 60/40 debt equity split proposed by FEI for the Development, the Commission Panel is cognizant of the 50 bps equity risk premium requested by FEI for this Project.

The proposed 60/40 debt equity capital structure is the same as that of FEI and other thermal energy providers, whether district or discrete, approved by the Commission to date, namely: Delta School District, Corix's UniverCity, Dockside Green and River District. **The Commission Panel accepts the proposed 60/40 debt equity structure for the Development.**

7.6.3 Return on Equity

In light of the Commission's determination in the Delta SD Decision to defer consideration of a single ROE risk premium for the entire TES class of service to other proceedings, such as the AES Inquiry or the 2012 Generic Cost of Capital hearing (2012 GCOC), FEI's request in this Application pertains only to the 50 bps equity risk premium for the Development, which FEI believes is appropriate given the small size and relative risks of this Project (Exhibit B-8, BCUC 1.23.1 and BCUC 1.23.2). FEI submits that the thermal energy service provided to the Strata is riskier than the natural gas class of service (FEI Final Submission, p. 12).

The rate design for this service is set in accordance with a forecast of costs of service for the entire contract period. The forecast used to set this rate contains the proposed 50 bps equity risk premium over the current benchmark ROE and, while FEI does not intend to revisit its equity risk premium or adjust the rate to reflect a change in the benchmark ROE in the future, it recognizes that the Commission may require it to do so. (Exhibit B-8, BCUC 1.23.6)

FEI argues that the comparability with investments such as the natural gas system and other district energy projects would indicate that a 50 bps premium on equity is appropriate. The Development is comparable to other TES that have received approval for a similar risk premium relative to the benchmark utility. In FEI's view, the appropriate comparison would be to consider the 50 bps premium for the Development in relation to the natural gas class of service as shown in Table 6 and to other District Energy Utilities as done in Table 7 (pages 108 and 109) of the Delta SD Decision. (Exhibit B-8, BCUC 1.23.10 and BCUC 1.23.10.1)

However, subsequently, FEI submitted that the item-by-item or tallying analysis in these tables does not, in FEI's view, adequately capture the broader circumstances in which each of the projects (or utilities) are situated and which affect the overall risk assessment. Since the Application seeks a 50 bps risk premium for the Development over FEI's ROE for the natural gas utility, the key comparison is therefore between the natural gas utility (or natural gas class of service) of FEI and the Development. FEI submits that, on the one hand, FEI's natural gas utility is a large mature

utility in which risks are diversified across a large rate base and large established customer base. On the other hand, the Development is a small stand-alone project with very little or no ability to pool risks with other projects. Even for risks that are characterized as low or very low for the Development, FEI argues that while there may be a low probability of occurrence of these risk events, if they do actually occur, they are likely to have material implications for the Development. (Exhibit B-13, BCUC 2.24.1)

FEI admits that it did not have specific discussions with the Developer regarding the level of ROE to be used in the rate calculations; however, FEI states it is reasonable to assume that the Developer would be expecting FEI to be making a return similar to other regulated assets in BC (Exhibit B-8, BCUC 1.23.4). Table 6 provides the sensitivity of the Phase 1 LFS Initial Contract Rate (i.e., the rate in the first year) to different levels of equity risk premiums, namely 0, 10 and 25 bps. FEI confirms that the Developer was not presented with Rates based on different equity risk premiums and was not made aware of the sensitivity of the Monthly Fee to different levels of equity risk premium (Exhibit B-8, BCUC 1.23.4 and BCUC 1.23.5.4). The Initial Contract Rates shown below are in contrast to FEI's proposed Rate of $21,600, based on a 50 bps equity risk premium.

Table 6: Sensitivity of Initial Contract Rate to Equity Risk Premium

Premium	ROE	Initial Contract Rate
25	9.75%	$21,425
10	9.60%	$21,320
0	9.50%	$21,257

(Source: Exhibit B-8, BCUC 1.23.5.4)

BCSEA states in its Final Submission that it takes no position on the quantum of FEI's proposed return on equity for this service to the Strata. (BCSEA Final Submission, p. 6) The CEC submits that the business risk of this standalone project is currently riskier compared to that of other utilities and that this risk has been considered in determining the appropriate equity return. The CEC further believes that, as this small business grows with a proven track record, the risk will become moderate relative to larger business. (CEC Final Submission, p. 4) Corix did not take a position with respect to the 50 bps equity risk premium requested by FEI.

Table 7: Comparative Assessment of the Development's Business Risks versus FEI's Natural Gas Class of Service

Risk Level	Tsawwassen Springs Project	FEI's Natural Gas Class of Service
Tsawwassen Springs Project has Lower Risk	• System performance risk associated with LFS: ***low-medium risk*** • Fuel (cost and availability) risk (heat from ground): ***no risk*** • Property development risk: ***low risk*** • Developer/customer connection risk (one counter party in the Strata): ***low risk*** • Load forecast uncertainty (energy use estimate does not impact Rate): ***no risk*** • Initial construction cost risk: ***no risk*** • Future construction cost risk: ***low risk*** • Public acceptance risk (seen as green alternative): ***low risk*** • Rate design – 100% fixed: ***no risk*** • Levelized approach to rates: ***low risk*** • Competitive challenges (Strata obliged through contracts to take thermal energy from FEI): ***low risk*** • Provincial climate change & energy policies (favourable government policies): **low risk**	• System performance risk: ***higher risk*** • Fuel (cost and availability) risk (natural gas): ***low-medium risk*** • Property development risk: ***medium to high risk*** • Developer/customer connection risk (due to building stock changes and competitive energy sources): ***medium to high risk*** • Load forecast uncertainty (mature utility with deferrals accounts): ***low risk*** • Initial construction cost risk: ***higher risk*** • Future construction cost risk: ***depends*** on nature of individual project • Public acceptance risk (established and widely used technology but not perceived as the clean option): ***medium risk*** • Rate design – 85% variable: ***higher risk*** • Levelized approach to rates: ***higher risk*** • Competitive challenges (competition with various energy options): ***medium risk*** • Provincial climate change & energy policies (reduction of GHG emissions and energy use): ***medium risk***
TS Project has Similar Risk	• Customer base (one known customer): ***low risk*** • Default risk of customer: ***low risk*** • Operating cost risk: ***low risk*** • Capital structure: 60/40 debt/equity ratio	• Customer base (established and diverse but very slow growth): ***low risk*** • Default risk of customer: ***low risk*** • Operating cost risk: ***low risk*** • Capital structure: 60/40 debt/equity ratio
TS Project has Higher Risk	• Technology risk (LFS): ***low-medium risk*** • Utility size (small size of project and separate class of service): ***higher risk*** • Financial risk (separate class of service): ***medium risk*** • Regulatory uncertainty (new, uncertainty, scrutiny and not streamlined): ***medium risk*** • Business development risk – TESDA at the risk of the shareholder: ***medium risk***	• Technology risk (natural gas boilers): ***low risk*** • Utility size (large and mature): ***low risk*** • Financial risk: ***low-medium risk*** • Regulatory uncertainty: ***low-medium risk*** • Business development risk: ***minimal risk***

(Source: Derived from Exhibit B-13, BCUC 2.24.1)

Commission Determination

As noted above, FEI is requesting an equity risk premium of 50 bps above the benchmark utility to provide thermal energy services to the Development. The Panel recognizes that the Developer has agreed to pay to FEI the Monthly Fees described in Schedule D of the Service Agreement and that these Monthly Fees include a 50 bps equity risk premium. However, the Panel also notes that the Developer did not agree specifically to the 50 bps equity risk premium and was not made aware of the sensitivity of the Monthly Fee to different levels of equity risk premium. Therefore, the Panel will give less weight, in determining the appropriate equity risk premium, to the fact that the Monthly Fee has been agreed to by the Developer than it will to a proper consideration of the risks.

With regard to the relevant benchmark, the Panel agrees with FEI that since FEI is requesting a 50 bps risk premium for this Project over FEI's ROE for the natural gas utility, one key comparison is between FEI's natural gas class of service and this Project. However, the Panel holds the view that a comparative analysis of the individual risk factors between this Project and the natural gas class of service is still useful to inform the appropriate value of the equity risk premium for this Project. Table 7 above is derived from information found in the evidentiary record. For each risk factor, the table further classifies the Development's business risks as being lower than, similar to or higher than those of FEI's natural gas class of service.

The comparative analysis shows that in many areas, the Development is either less risky than FEI's natural gas class of service (e.g., system performance, fuel cost and availability, load forecast, favourable governmental policies, rate design and public acceptance) or would have similar risks. Other risk factors were ranked as more risky by FEI; however, the Panel disagrees with some of the assessments. For instance, the Panel points out that FEI itself had assessed the technological risk as very low, describing the system as a relatively simple one consisting of high density polyethylene pipe and not prone to failure (Exhibit B-8, BCUC 1.10.1), only to change it later to "low-medium" (Exhibit B-13, BCUC 2.24.1). With respect to financial risks, the Panel notes that, according to Ms. McShane, the financial risks are similar since the capital structures are similar, i.e., 60 percent debt and 40 percent equity (Opinion of Ms. McShane, pp. 3-4).

In light of the Panel's previous rejection of the proposed rate design and suggestions for acceptable rate designs, if FEI's (or its subsidiary's) shareholder is responsible for economic risk, the Panel is of the opinion that a risk premium of 50 bps premium above the benchmark utility ROE is justified. Otherwise the Panel is not persuaded that any premium is justified.

7.6.4 Debt Cost

FEI continues to believe there is merit in its proposed approach of having a common capital structure, cost of debt and ROE risk premium for its TES projects as a whole; however, it accepts the Commission's direction that these matters should be dealt with in future proceedings such as the AES Inquiry or the 2012 GCOC (Exhibit B-8, BCUC 1.24.1). Therefore, FEI seeks approval for the use of FEI's 2011 embedded cost of debt to finance the Development, based on a capital structure with 60 percent debt. Part of the rationale put forward by FEI to support its proposal is that the Project is brought forward by FEI under section 12A of its General Terms and Conditions. FEI's 2011 cost of debt is summarized below from information presented in Table 4 of the Application.

Table 8: FEI's Cost of Debt

	Rate	Share in Capital Structure
Short-term debt rate	4.50%	1.63%
Long-term debt rate	6.95%	58.37%

(Source: Exhibit B-1, p. 13)

FEI also submits that its proposal is supported by Ms. McShane's evidence, which states:

> "While the assignment of FEI's cost of debt to the TES is a departure from the pure application of the stand-alone principle, it is consistent with regulatory practice, where the actual cost of debt of the entity raising the debt is mirrored down to its various regulated operations. This practice implicitly recognizes that all customers benefit by way of a lower cost of debt from the size and diversity of the company's operations." (FEI Final Submission, pp. 12-13)

In Ms. McShane's opinion, FEI's cost of debt would not be impacted in any measurable way by the financing requirements of the TES given the small size of the TES relative to FEI in total (Exhibit B-1, Appendix D, p. 4).

Through the Information Request process, the Commission explored further the issue of the application of the stand-alone principle to the cost of debt, in particular whether FEI should finance the Development based on FEI's embedded cost of debt or a deemed cost of debt calculated in a manner respecting the pure application of the stand-alone principle (Exhibit B-8, BCUC 1.25.0).

As a stand-alone, FEI expects the cost of debt of the Development to be similar to that submitted for the Delta SD Project. To support this view, FEI notes that, on page 114 of the Commission's Delta SD Decision, the Commission stated its belief that the Delta SD Project should be as segregated as possible from FEI's natural gas class of service to minimize the potential for any cross-subsidy flowing from the natural gas class of service to Delta SD. As a result, the Commission determined that FEI should calculate a deemed cost of debt based on an entity with a BBB rating and add to it a premium to reflect the additional cost to arrange an incremental small debt issue. (Exhibit B-8, BCUC 1.25.1)

Applying this methodology to the Development results in a deemed cost of debt of 5.76 percent. This rate is composed of a 20-year interpolated 3.12 percent credit spread, a 20-year interpolated Government of Canada Benchmark rate of 2.29 percent and an annualized issuance fee of 0.35 percent (Exhibit B-8, BCUC 1.25.1). The BBB-rated comparable entities and associated credit spreads were drawn from the Power, Energy Infrastructure, Utilities and Telecom sectors (Exhibit B-13, BCUC 2.21.3).

When asked to recalculate a deemed cost of debt based on BBB-rated entities operating specifically in the Distribution Utilities sector, FEI revised downward the indicative spread from the 20-year interpolated average rate of 3.12 percent to 2.58 percent, i.e., a reduction of 54 bps. In updating the cost of debt rate, FEI also revised upward the 20-year interpolated Government of Canada benchmark rate from 2.29 percent to 2.45 percent. This had the effect of lowering the deemed

cost of debt rate from 5.76 percent to 5.38 percent, an overall 38 bps rate decrease. (Exhibit B-13, BCUC 2.21.10)

FEI discusses the pros and cons of each alternative. On the one hand, accounting for the cost of debt at a rate equal to FEI's embedded interest rate is both efficient and logical as FEI is the project proponent. Another benefit of this approach is that the rate is known and the assignment of a debt rate from the entity raising the capital is common in regulatory practice. On the other hand, deeming the cost of debt in a manner similar to what the Commission directed in the Delta SD Project is logical in that it attempts to address the stand-alone project principle. However, FEI states that this is a more subjective approach. (Exhibit B-8, BCUC 1.25.6)

Neither the CEC nor Corix take a position with respect to FEI's proposed cost of debt. For its part, BCSEA is of the view that if the Development is provided by FEI, it would be appropriate to use FEI's cost of debt. Alternatively, if the thermal energy service is to be provided by FAES, BCSEA posits that the cost of debt based on entities with a BBB rating with an additional premium should be applied, consistent with the Delta SD Decision. BCSEA notes that, in the Delta SD Decision and subsequent compliance decision, the Commission has required FAES to use a cost of debt rate based on BBB-rated entities operating in the AES/TES class of service or alternatively in the distribution utility class of service. (BCSEA Final Submission, p. 5)

In its Reply Submission, FEI admits that both approaches regarding the cost of debt can be logical. However, FEI submits that it is not judicious to require FEI to re-design the Rates in this Project using a different cost of debt approach. FEI's rationale to support this view is that this Project is a legacy project, and the rate structure under which FEI is providing service to the Development was developed in accordance with the approved GT&C 12A as part of FEI's AES/TES class of service and without the Commission's directives in the Delta SD Decision. Also, given the relatively small size of the Project, FEI believes that the rate design using FEI's embedded cost of debt is still reasonable. (FEI Reply Submission, pp. 3-4)

Commission Determination

The Panel notes that FEI does admit that the two approaches with respect to cost of debt can be logical, i.e., either using FEI's 2011 embedded cost of debt or deeming the cost of debt in a manner similar to what the Commission directed in the Delta SD Decision. In that Decision, it is worth noting the Commission did not agree with FEI that a departure from the pure application of the stand-alone principle was warranted for that Project. To the contrary, the Commission believed that the Delta SD Project should be as segregated as possible from FEI's natural gas class of service to minimize the potential for any cross-subsidy flowing from the natural gas class of service to Delta SD, a view made evident in the Commission's directive that FEI set up a separate corporate entity to conduct the Delta SD Project.

For the same reasons and pending the outcome of the AES Inquiry, the Panel directed FEI, in section 7.4, to assign the Development to a separate affiliate, such as FAES. **For this reason, the Panel does not accept FEI's proposal in this Application to use FEI's 2011 embedded cost of debt to finance the Development and concurs with BCSEA that the cost of debt rate should instead be consistent with the Commission's directive in the Delta SD Decision.**

Directive 3(c) in Order G-31-12 required FEI to include a cost of debt rate based on an entity with a BBB rating with an additional premium to reflect the extra cost to arrange an incremental small debt issue. In its Delta SD Compliance Filing, FAES derived a cost of debt rate for providing TES to the Delta SD, which consisted of a 20-year interpolated 3.12 percent credit spread, a 20-year interpolated Government of Canada Benchmark rate of 2.44 percent (as of March 14, 2012) and an annualized issuance fee of 0.35 percent. FAES indicated that the BBB-rated comparable entities and associated credit spreads were drawn from the Power, Energy Infrastructure, Utilities and Telecom sectors. The Panel notes that FEI applied the same methodology when asked to calculate a deemed cost of debt for the Development as a standalone.

However, as explained in the Reasons for Decision appended to Commission Order G-71-12, the Panel reiterates here that the intention is for FAES or the other separate affiliate to which FEI will

assign this Project, to use BBB-rated entities in the thermal energy sector, as opposed to entities drawn from the Power, Energy Infrastructure, Utilities and Telecom sectors, which the Commission does not consider to be a good proxy for the AES/TES class of service. In fact, the Commission concluded that using BBB-rated entities from the Power, Energy Infrastructure, Utilities and Telecom sectors resulted in an upward bias to the indicative credit spread included in the deemed cost of debt rate derived by FAES for the Delta SD Project. (Appendix A to Order G-71-12, pp. 4-5) Directive 1(d) of Order G-71-12 further specified that if FAES is not able to find entities operating specifically in the AES/TES class of service, the Commission would accept the use of BBB-rated distribution utilities, such as AltaGas Ltd. and Emera Inc., as a proxy for the TES class of service.

In the case of the Development, using the latter two distribution utilities to calculate the credit spread would lower the cost of debt rate to 5.38 percent (Exhibit B-13, BCUC 2.21.10). This compares to FEI's 2011 embedded cost of debt at 6.88 percent, as calculated from the information in Table 8 above. In this current environment of low interest rates, the Panel notes that deeming the cost of debt rate for the Development would result in one that is lower than FEI's 2011 embedded cost of debt, thus benefiting the Strata.

Therefore, the Panel directs FAES, or the other separate affiliate to which FEI will assign this Project, to re-calculate its deemed cost of debt rate based on BBB-rated entities operating specifically in the AES/TES class of service and using the most recent Government of Canada benchmark bond yields. If such entities did not exist, the Panel would accept BBB-rated distribution utilities, such as AltaGas Ltd. and Emera Inc. as a proxy for the TES class of service.

In its previous determination, the Panel directed that FEI is entitled to a premium only if it accepted a commensurate amount of risk. The cost of debt should reflect risk as does the cost of equity. The Panel has directed FEI, or its affiliate, to recalculate the cost of debt based on entities operating in a similar environment. However, the Panel has also provided FEI with the ability to choose the amount of risk it will assume in providing this service. **If FEI chooses to not assume any economic risk, the Panel directs FEI, or its subsidiary, to reflect this in the cost of debt, by lowering the rate by 50 basis points.**

Further, going forward:

i. If the Commission approves, in the Generic Cost of Capital (GCOC) proceeding, a methodology to establish a deemed interest rate automatic adjustment mechanism (Interest AAM), FAES or the other separate affiliate to which FEI will assign this Project, is directed to update its cost of debt rate annually using that Interest AAM and to track the differences in the Development's deferral account.

ii. Alternatively, if the Commission does not approve an Interest AAM in the GCOC proceeding, FAES or the other separate affiliate to which FEI will assign this Project is directed to review its deemed cost of debt rate periodically, using the same methodology as directed in this Decision. The Panel asks FAES, or the other separate affiliate to which FEI will assign this Project, to submit a proposal within 30 days regarding the frequency at which it would review its deemed cost of debt or any triggering change in the Government of Canada benchmark bond yields, in case the GCOC does not produce an Interest AAM.

7.7 Future TES Proceeding

FEI initially proposed that the regulatory review consist of written comments from the Commission and registered interveners with a written submission by FEI to respond to concerns raised (Exhibit B-1, Application, p. 2). Given the ongoing AES Inquiry and the issues that have been raised at a policy level there, and in other related proceedings such as the Delta SD, the Commission determined that a written proceeding with IRs was necessary. The Commission also sought comments from FEI and registered interveners on the use of the SRP after one round of IRs. Although no intervener expressed a concern over the use of the SRP in this case, FEI did express some concern given the higher level policy type issues that could be raised. FEI commented that while it generally supports the notion of the SRP, the established written process may be more effective in this case (Exhibit B-6, p. 2).

The CEC raised concerns about the length and costs of the regulatory approval process for the regulated TES market and how "streamlining" of the process could be achieved over time (Exhibit C3-1, CEC 1.8). FEI responded that it "believes that it is reasonable to expect that the regulatory process will become more efficient, more streamlined and more standardized as the market continues to develop, the business models and associated regulatory issues are more settled, and the experience with thermal energy service projects continues to grow" (Exhibit B-11,

CEC 1.8.2). The CEC confirmed its support for the development of a more efficient regulatory process for TES applications in due course, i.e., after the Commission's Inquiry Decision is issued and the compliance filings are settled (CEC Final Argument, p. 6).

Commission Discussion

The Panel is in favour of efficient regulatory processes that satisfy the requirements of just and reasonable rate setting with a fair return to the utilities it regulates. With the exploration and settlement of many of the key issues from the AES Inquiry, review of these early TES applications, standardization of the business/financial models and agreements for the numerous FEI TES projects and the Decision and Guidelines that follow, the Panel is confident that streamlining the regulatory process is achievable and desirable, commensurate with the size and scope of the project.

In the Panel's view, the most significant deterrents to efficient regulatory processing of applications relate to lack of clarity on matters related to the use and application of the TESDA and the assurance that the cost-of-service rate design is just, fair and equitable. The Panel considers the following would expedite the regulatory process:

1. Ensure that there is no cross-subsidization of individual (or discrete) project costs from either natural gas or other thermal customers.
2. Ensure that no direct project costs accrue to the TESDA.
3. Bring forward the application from FAES, or an alternate subsidiary, pending the resolution of the AES Inquiry.
4. Provide an interim fair and just recovery for balances in the TESDA. Alternatively ensure that any contract signed with a TES customer provides for such a recovery when the future rate design hearing has concluded.
5. Ensure that project-specific costs (such as engineering, regulatory and legal) are included in the cost of service or an alternative rate design mechanism.
6. Ensure that capitalized overhead is properly addressed.
7. Ensure future potential costs and cost recoveries are properly addressed (e.g., cost overruns, asset retirement obligations).

7.8 Negative Salvage

The purchase agreement between FEI and the Developer provides for the Strata Corporation to buy out each LFS at year 25, at a cost of the remaining un-depreciated capital cost. However, there could potentially be a situation where the LFS would have to be removed or replaced before the end of the contract term. If so, and if FEI is unable to recover the costs from the Strata Corporation, FEI could be responsible for the cost of removal. FEI did not address cost of removal in its application and there were no IRs with regard to this issue. However, in the recent Fortis Energy Utilities 2012-2013 RRA Decision, the Commission has approved the provision of negative salvage in rates and to treat the total collected negative salvage amounts, net of actual salvage costs, as a rate base credit account.

Commission Determination

The Commission has previously ordered that negative salvage be provided for in rates. **FEI is directed to address the issue of negative salvage as it pertains to the Tsawwassen Springs project and, if necessary, provide the estimated salvage cost calculations and rate impact within 45 days of the date of this Decision.**

8.0 SUMMARY OF KEY COMMISSION DIRECTIVES

	Directive	Page
1.	The expenditures of $1,076,000 plus 10 percent capitalization of $107,600 are approved.	29
2.	The rate design and the rates are denied. The Panel would accept a rate design that reflected the following principles: A separate variance account for this project, with any balances in this variance account to be the responsibility of the Strata. Alternatively, if the shareholder assumed all the risks and benefits of under and over recoveries, the Panel is prepared to accept this departure from GT&C 12A. If a deferral account is used, FEI is directed to file an annual report to the Commission, by December 31 of each year, detailing the transactions and balances in this deferral account. The Panel is prepared to accept a levelized rate in a rate design in which FEI accepts the risks and rewards for under and over recoveries. This would be consistent with the intent of a firm "cost based" 25-year contract rate. Otherwise, the Panel would accept a rate that is levelized over shorter periods. FEI is directed to submit a plan for a series of shorter periods, as the basis for levelized rates, to the Commission for approval within 45 days of the date of this Decision. With regard to the amortization of the TESDA balance, in the event that FEI does not accept the risks and rewards of the project, FEI is directed to provide an allocation methodology, for approval by the Commission within 45 days of the date of this Decision. that can be applied on an interim basis, until a future hearing establishes a permanent allocation. This allocation can be a percentage of the balance in the TESDA, the Strata's monthly rate, or any other methodology that FEI can demonstrate to be just and reasonable.	41-43
3.	FEI is directed to remove any amounts related to the cost of provision of service to date from the TESDA and propose a treatment of those costs that is not unfair and unjust to any existing thermal energy customer, including the Tsawwassen Springs Strata.	44
4.	FEI is directed to propose a reasonable estimate of the cost of this hearing and propose an allocation to the Strata. The balance of the costs should be charged to the TESDA as a non project-specific expense to be borne by all thermal energy customers.	45
5.	Pending the outcome of the Inquiry, the Panel directs FEI to assign the Development, on an interim basis, to a separate affiliate, such as FAES, within 45 days of the date of this decision.	47

6.	The Panel directs FEI, within 45 days of the date of this decision, to provide an explanation of how the amount of thermal energy delivered by the LFS can be determined and communicated to the Strata. In the absence of such an explanation, the Panel directs FEI to provide a proposal of how the thermal energy output can be measured.	54
7.	In light of the Panel's previous rejection of the proposed rate design and suggestions for acceptable rate designs, if FEI's (or its subsidiary's) shareholder is responsible for economic risk, the Panel is of the opinion that a risk premium of 50 bps premium above the benchmark utility ROE is justified. Otherwise the Panel is not persuaded that any premium is justified.	64
8.	The Panel does not accept FEI's proposal in this Application to use FEI's 2011 embedded cost of debt to finance the Development and concurs with BCSEA that the cost of debt rate should instead be consistent with the Commission's directive in the Delta SD Decision. Re-calculate the deemed cost of debt rate based on BBB-rated entities operating specifically in the AES/TES class of service and using the most recent Government of Canada benchmark bond yields. If such entities did not exist, the Panel would accept BBB-rated distribution utilities, such as AltaGas Ltd. and Emera Inc. as proxy for the AES/TES class of service. If FEI chooses to not assume any economic risk, the Panel directs FEI, or its subsidiary, to reflect this in the cost of debt, by lowering the rate by 50 basis points.	67-68
9.	FEI is directed to address the issue of negative salvage as it pertains to the Tsawwassen Springs project and, if necessary, provide the estimated salvage cost calculations and rate impact within 45 days of the date of this Decision.	71

DATED at the City of Vancouver, in the Province of British Columbia, this 20th day of July 2012.

Original signed by:

DAVID M. MORTON
CHAIR

Original signed by:

RICHARD D. REVEL
COMMISSIONER

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BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER G-100-12

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

and

An Application by FortisBC Energy Inc.
for Approval of a Capital Expenditure Schedule and Rate Design and Rates
Established in an Operating and Maintenance Agreement between FortisBC Energy Inc.
and the Strata Corporation of Tsawwassen Springs Development
to Provide Thermal Energy Services

BEFORE: D.M. Morton, Commissioner/Panel Chair — July 19, 2012
R.D. Revel, Commissioner

O R D E R

WHEREAS:

A. On March 1, 2012, FortisBC Energy Inc. (FEI) filed an application (Application) with the British Columbia Utilities Commission (Commission) for Approval of a Capital Expenditure Schedule and Rate Design and Rates Established in an Operating and Maintenance Agreement (Service Agreement) between FEI and the Strata Corporation of Tsawwassen Springs Development to Provide Thermal Energy Services (TES);

B. FEI filed Appendices A – Operating and Maintenance Agreement, and B – Purchase and Sale Agreement to the Application on a confidential basis;

C. In the Application, FEI seeks acceptance of capital expenditures, pursuant to section 44.2 of the *Utilities Commission Act* (Act), of $1.184 million for the Loop Field System component of the Ground Source Heat Pump System;

D. FEI also seeks approval, pursuant to sections 59-61 of the Act and Commission Order G-141-09, of the rate design and rates established by the Service Agreement filed with this Application as just and reasonable rates under sections 59-61 of the Act;

E. The Commission has reviewed the Application and has determined the capital expenditures are in the public interest and should be approved.

NOW THEREFORE pursuant to sections 44.2 and 59-61 of the Act, the Commission orders as follows:

1. Pursuant to section 44.2 of the Act, the capital expenditures estimated at $1.184 million for the Loop Field Systems at Tsawwassen Springs Development as described in section 2.5.1 the Application are accepted.

…/2

2. Pursuant to sections 59-61 of the Act, approval of the rate design and rates established in the Service Agreement, filed as Appendix A to the Application, and described in section 2.3.1 of the Application, is denied.

3. FEI is directed to submit, within 45 days of the date of this Order, a revised rate design and rates taking into account the following factors as explained in the Reasons for Decision attached as Appendix A to this Order:

    a. The use of the existing Thermal Energy Services Deferral Account (TESDA) to record project variances is denied;

    b. FEI shall propose a just and reasonable allocation of the existing TESDA balance to this project for inclusion in the cost of service for this project for approval by the Commission;

    c. The use of FEI's 2011 embedded cost of debt rate is denied;

    d. The proposed return on equity risk premium for this project will be approved only if FEI's shareholders and not ratepayers absorb the risk of project variances;

    e. FEI is to assign, on an interim basis pending the outcome of the Alternative Energy Solutions (AES) Inquiry, the Tsawwassen Springs project to a regulated affiliate, such as FortisBC Alternative Energy Services Inc. and provide proof of the assignment to the Commission;

    f. FEI shall propose a reasonable estimate of the cost of this hearing and an allocation of these costs between the Tsawwassen Springs Strata Corporation and the AES program overhead that is recorded and tracked in the TESDA for approval by the Commission;

    g. FEI shall provide a justifiable estimate for negative salvage value covering the expenditure and propose treatment of these costs;

    h. FEI is directed to remove any amounts related to the cost of provision of service to date from the TESDA and propose a treatment of those costs that is not unfair and unjust to any existing thermal energy customer, including the Tsawwassen Springs Strata Corporation; and

    i. FEI is directed to provide an explanation or proposal for how the thermal energy provided by FEI can be measured and how the measurements can be communicated to the Strata Corporation.

DATED at the City of Vancouver, in the Province of British Columbia, this 19th day of July 2012.

BY ORDER

Original signed by:

D.M. Morton
Commissioner

APPENDIX A
to Order G-33-12
Page 1 of 1

FORTISBC ENERGY INC.

An Application by FortisBC Energy Inc.
for Approval of a Capital Expenditure Schedule, Rate Design and Rates
for an Operating and Maintenance Agreement to Provide Thermal Energy Services
Between FortisBC Energy Inc. and the Strata Corporation of Tsawwassen Springs Development

REGULATORY TIMETABLE

ACTION	DATE (2012)
Registration of Interveners	Friday, March 30
Filing of Participant Assistance / Cost Award Budgets	Wednesday, April 4
Commission Information Request No. 1	Thursday, April 5
Intervener Information Request No. 1	Wednesday, April 11
Response to Commission Information Request No. 1	Wednesday, April 18
Response to Intervener Information Request No. 1	Wednesday, April 25
Commission and Intervener Information Requests No. 2	Wednesday, May 9
Response to Commission and Intervener Information Requests No. 2	Wednesday, May 23
FortisBC Energy Inc.'s Final Submission	Wednesday, May 30
Intervener Final Submission	Wednesday, June 6
FortisBC Energy Inc.'s Final Reply Submission	Wednesday, June 13

Sections 59 and 60 of the *Utilities Commission Act*

Discrimination in rates

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.

(3) The commission may, by regulation, declare the circumstances and conditions that are substantially similar for the purpose of subsection (2) (b).

(4) It is a question of fact, of which the commission is the sole judge,

(a) whether a rate is unjust or unreasonable,

(b) whether, in any case, there is undue discrimination, preference, prejudice or disadvantage in respect of a rate or service, or

(c) whether a service is offered or provided under substantially similar circumstances and conditions.

(5) In this section, a rate is "unjust" or "unreasonable" if the rate is

(a) more than a fair and reasonable charge for service of the nature and quality provided by the utility,

(b) insufficient to yield a fair and reasonable compensation for the service provided by the utility, or a fair and reasonable return on the appraised value of its property, or

(c) unjust and unreasonable for any other reason.

Setting of rates

60 (1) In setting a rate under this Act

(a) the commission must consider all matters that it considers proper and relevant affecting the rate,

(b) the commission must have due regard to the setting of a rate that

(i) is not unjust or unreasonable within the meaning of section 59,

(ii) provides to the public utility for which the rate is set a fair and reasonable return on any expenditure made by it to reduce energy demands, and

(iii) encourages public utilities to increase efficiency, reduce costs and enhance performance,

(b.1) the commission may use any mechanism, formula or other method of setting the rate that it considers advisable, and may order that the rate derived from such a mechanism, formula or other method is to remain in effect for a specified period, and

(c) if the public utility provides more than one class of service, the commission must

(i) segregate the various kinds of service into distinct classes of service,

(ii) in setting a rate to be charged for the particular service provided, consider each distinct class of service as a self contained unit, and

(iii) set a rate for each unit that it considers to be just and reasonable for that unit, without regard to the rates set for any other unit.

(2) In setting a rate under this Act, the commission may take into account a distinct or special area served by a public utility with a view to ensuring, so far as the commission considers it advisable, that the rate applicable in each area is adequate to yield a fair and reasonable return on the appraised value of the plant or system of the public utility used, or prudently and reasonably acquired, for the purpose of providing the service in that special area.

(3) If the commission takes a special area into account under subsection (2), it must have regard to the special considerations applicable to an area that is sparsely settled or has other distinctive characteristics.

(4) For this section, the commission must exclude from the appraised value of the property of the public utility any franchise, licence, permit or concession obtained or held by the utility from a municipal or other public authority beyond the money, if any, paid to the municipality or public authority as consideration for that franchise, licence, permit or concession, together with necessary and reasonable expenses in procuring the franchise, licence, permit or concession.

List of Acronyms

2010-2011 RRA	FortisBC Energy Inc. 2010-2011 Revenue Requirements Application
2012 GCOC	2012 Generic Cost of Capital hearing
AES	Alternative Energy Solutions
AES Inquiry	Alternative Energy Solutions and Other New Initiatives Inquiry
AFUDC	Allowance for Funds Used During Construction
BAU	business as usual
BCSEA	B.C. Sustainable Energy Association and the Sierra Club of British Columbia
BCUC	British Columbia Utilities Commission
bps	basis points
CEA	*Clean Energy Act*
CEC	Commercial Energy Consumers Association of British Columbia
Commission	British Columbia Utilities Commission
Corix	Corix Utilities Inc.
CPCN	Certificate of Public Convenience and Necessity
Delta SD	Delta School District Number 37
FAES	FortisBC Alternative Energy Services Inc.
FEI	FortisBC Energy Inc.
FEU	FortisBC Energy Utilities
GCOC	Generic Cost of Capital
GHG	greenhouse gas
GSHP	Ground Source Heat Pump
GT&C 12A	General Terms and Conditions 12A

Interest AAM	interest rate automatic adjustment mechanism
IRs	information requests
LFS	Loop Field Systems
LTRP	2010 Long Term Resource Plan
NG	natural gas
NSA	Negotiated Settlement Agreement
O&M	Operations and Maintenance
O&M Agreement	Operating and Maintenance Agreement
ROE	return on equity
RRA Application	FortisBC Energy Utilities (FEU) (comprising FortisBC Energy Inc., FortisBC Energy (Vancouver Island) Inc. and FortisBC Energy (Whistler) Inc.) 2012-2013 Revenue Requirements and Natural Gas Rates Application
SRP	Streamlined Review Process
Strata	Strata Corporation
TES	thermal energy services
TESDA	Thermal Energy Services Deferral Account
the Application	an application by FortisBC Energy Inc. for approval of expenditures under section 44.2 of the *Utilities Commission Act* and of a rate design and rate under sections 59 - 61 of the *UCA*
the Developer	Tsawwassen Golf & Country Club Ltd.
the Development	Tsawwassen Springs Development
TPP	Transfer Pricing Policy
UCA	*Utilities Commission Act*

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

and

FortisBC Energy Inc.
Approval of a Capital Expenditure Schedule, Rate Design and Rates for an Operating and Maintenance Agreement to Provide Thermal Energy Services between FortisBC Energy Inc. and the Strata Corporation of Tsawwassen Springs Development Application

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated March 16, 2012 - Order G-33-12 Establishing a Regulatory Timetable
A-2	Letter dated March 22, 2012 - Appointment of Commission Panel
A-3	Letter dated April 5, 2012 – Commission Information Request No. 1 to FEI
A-4	Letter dated April 5, 2012 – **Confidential** Commission Information Request No. 1 to FEI
A-5	Letter dated April 5, 2012 – Request for Comments regarding Streamlined Review Process
A-6	Letter dated April 13, 2012 – Letter granting Intervener status to the Commercial Energy Consumers Association
A-7	Letter dated April 25, 2012 – Streamlined Review Process Determination Regulatory Timetable established in Order G-33-12 will remain in effect
A-8	Letter dated May 9, 2012 – Commission Information Request No. 2 to FEI
A-9	Letter dated May 9, 2012 – **Confidential** Commission Information Request No. 2 to FEI

Exhibit No.	Description
APPLICANT DOCUMENTS	
B-1	**FORTISBC ENERGY INC. (FEI)** Letter dated March 2, 2012 - Application for Approval of a Capital Expenditure Schedule, Rate Design and Rates Established in an Operating and Maintenance Agreement between FortisBC Energy Inc. and the Strata Corporation of Tsawwassen Springs Development to Provide Thermal Energy Services
B-1-1	**CONFIDENTIAL** Letter dated March 2, 2012 – FEI Submitting Confidential Appendixes to the Application
B-2	Letter dated April 2, 2012 – FEI Submitting Disclosure Statement
B-3	**PUBLIC** Letter dated April 2, 2012 – FEI Submitting Working Financial Models
B-3-1	**CONFIDENTIAL** Letter dated April 2, 2012 – FEI Submitting Working Financial Models
B-4	Letter dated April 5, 2012 – FEI Submitting Proof of Notice and Publication
B-5	Letter dated April 6, 2012 – FEI Submitting Proof of Notice to the Strata Corporation
B-6	Letter dated April 13, 2012 – FEI Submitting Comments on Suitability of Streamlined Review Process
B-7	Letter dated April 13, 2012 – FEI Late Filing Notice to BCUC IR No. 1
B-8	Letter dated April 20, 2012 – FEI Submitting Response to BCUC IR No. 1
B-9	**CONFIDENTIAL** Letter dated April 20, 2012 – FEI Submitting Response to BCUC IR No. 1.5.1
B-10	**CONFIDENTIAL** Letter dated April 20, 2012 – FEI Submitting Response to Confidential BCUC IR No. 1
B-11	Letter dated April 25, 2012 – FEI Submitting Response to CEC IR1
B-11-1	**CONFIDENTIAL** Letter dated April 25, 2012 – FEI Submitting Confidential Response to CEC IR1 Attachment 2.2
B-12	**CONFIDENTIAL** Letter dated May 23, 2012 - Response to BCUC Confidential IR No.2
B-13	Letter dated May 23, 2012 - Response to BCUC IR No.2

Exhibit No.	Description

INTERVENER DOCUMENTS

C1-1	**BC SUSTAINABLE ENERGY ASSOCIATION AND SIERRA CLUB BRITISH COLUMBIA (BCSEA)** Letter dated March 20, 2012 – Request for Intervener Status by William J. Andrews
C1-2	Letter dated April 11, 2012 – BCSEA Submitting comments regarding Information Request
C1-3	Letter dated April 11, 2012 – BCSEA Submitting response to Exhibit A-5
C1-4	Letter dated May 9, 2012 – BCSEA Not submitting an Information Request
C2-1	**CORIX UTILITIES INC. (CORIX) -** Letter dated March 30, 2012 – Request for Intervener Status by David Bursey, Bull Housser & Tupper LLP
C2-2	Letter dated April 11, 2012 – Corix Submitting comments regarding Information Request
C3-1	**COMMERCIAL ENERGY CONSUMERS ASSOCIATION OF BRITISH COLUMBIA (CEC)** Letter dated April 11, 2011 – Request for Late Intervener Status by Christopher Weafer
C3-2	Letter dated May 9, 2012 – CEC Submitting no further questions