IN THE MATTER OF

CORIX MULTI-UTILITY SERVICES INC.

NEIGHBOURHOOD UTILITY SERVICE AT UNIVERCITY BURNABY

CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY

DECISION

May 6, 2011

BEFORE:

D. A. Cote, Commissioner
L. A. O'Hara, Commissioner
D. Morton, Commissioner

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1.0 EXECUTIVE SUMMARY

On November 26, 2010, Corix Multi-Utility Services Inc. (CMUS or the Company) filed an Application for a Certificate of Public Convenience and Necessity (CPCN) under sections 45 and 46 of the *Utilities Commission Act* (the *Act*) to construct and operate an alternative energy-based district energy system for the UniverCity residential community on Burnaby Mountain. The Company also sought approval under sections 56, 60, and 61 of the *Act* for a deemed capital structure, Return on Equity (ROE), long term debt financing costs, a levelized rate structure and a revenue deficiency deferral account.

UniverCity is being developed by Simon Fraser University (SFU) Trust in four Phases. This application pertains to Phases 3 and 4 which were started in 2011 with a completion date scheduled for 2019. The objective of SFU Trust is to implement alternative energy technologies to achieve reductions in GHG emissions and enhance the sustainability of the UniverCity community. Accordingly, SFU Trust is mandated to develop UniverCity in a sustainable manner and building developers must adhere to a set of green building requirements.

The proposed district energy system consists of a production facility and a distribution system. The production facility is planned to be built in two steps; a natural gas fuelled temporary Central Energy Plant (CEP) followed in 2016 by a permanent CEP fuelled by an alternative energy source likely to be Biomass. Both of these will be supported by a distribution system consisting of main trunk pipes, branch connections and energy transfer stations which will be constructed using a phased approach. Based on the anticipated energy intensities of the expected types of buildings, CMUS estimates peak heating load at 5.7 MW with annual heat sales of 14,020 MWh.

In assessing the alternative energy sources a number of options were considered and following a screening analysis CMUS has proposed using Biomass to provide the base load energy for the permanent CEP. In addition, the potential for a combined solution for UniverCity and SFU campus as well as the data centre option remains under consideration.

The total capital costs for the temporary and permanent CEPs are forecast to be $12.215 million over the nine year development period. The developers will make a contribution of $1.00 per square foot of buildable area on each development parcel which is expected to defray $2.223 million of these costs. In addition, BC Hydro through its Power Smart Sustainable Communities Program has indicated support for the project. The parties are in the process of developing an agreement which is estimated will provide a capital incentive of $1.3 million to CMUS following implementation of the permanent CEP. Operating costs for the permanent CEP are estimated at $319,000 annually in 2017.

During the review process the Commission Panel identified the following key issues:

- Adequacy of Public Consultation;
- Alignment with *Clean Energy Act* and Provincial Government Policy;
- Availability and Costs of Biomass;
- Adequacy of the Load Analysis and Energy Forecast;
- Consideration of Agreements with SFU Trust and BC Hydro;
- Risk of Stranded Assets;
- Adequacy of Project Description; and
- Adequacy of Cost Estimates.

After considering these key issues, the Commission Panel has determined there is sufficient evidence to support partial acceptance of this CPCN Application. Accordingly, the Panel grants a CPCN for the temporary CEP but does not approve at this time construction of the permanent CEP. The Panel is supportive of the alternative energy solution but is concerned with the lack of certainty and detail related to it. In accordance with this, the Panel has suspended further consideration of this matter until CMUS is able to more adequately meet the requirements as outlined in this Decision.

For the purpose of determining the rates to be changed the Commission Panel has, among other things, also approved the following:

- A Premium of 50 basis points over the benchmark ROE;
- The proposal to finance 60 percent of the rate base with deemed debt and the remaining 40 percent with common equity;
- A debt rate of 6 percent;
- The proposal for a rate design with a 60 percent fixed monthly charge and a 40 percent variable charge but to be recalculated using a 20 year levelized rate based solely on the temporary CEP.

2.0 INTRODUCTION

This Decision deals with an application by Corix Multi-Utility Services Inc. for a Certificate of Public Convenience and Necessity to construct and operate an alternative energy-based district energy system (DES) for UniverCity, a residential community being developed on Burnaby Mountain (the Application). The DES, which consists of a central energy plant, a distribution piping system and energy transfer stations, will provide thermal energy service for space heating and hot water to this community.

The proposed Biomass based DES will be developed in phases with early building loads served by a temporary natural gas boiler plant that will be transitioned to what may be a permanent biomass-based central energy plant when the customer load reaches sufficient volume. The rationale for this phased approach is to allow the utility to match capital investment with growth "while providing a flexible and economic solution for transition to renewable energy." (Exhibit B-1, p. 6)

2.1 The Applicant

Corix Multi-Utility Services Inc. is a subsidiary of Corix Utilities Inc. (Corix), a company incorporated in British Columbia and headquartered in Vancouver. CMUS provides multi-utility and energy utility services to customers across Canada and manages a portfolio of regulated utility systems in BC. CMUS will be responsible for development and ownership of the Neighbourhood Utility Service (NUS), which is a community based utility with a primary responsibility to develop, implement, operate and maintain the district energy system.

2.2 Key Stakeholders

UniverCity is a residential community being developed by SFU Community Trust which is building a sustainable community that provides its residents with highly energy efficient buildings and a true live-work-play community. Accordingly, the environmental benefits associated with a DES based on alternative energy sources are attractive to the SFU Community Trust.

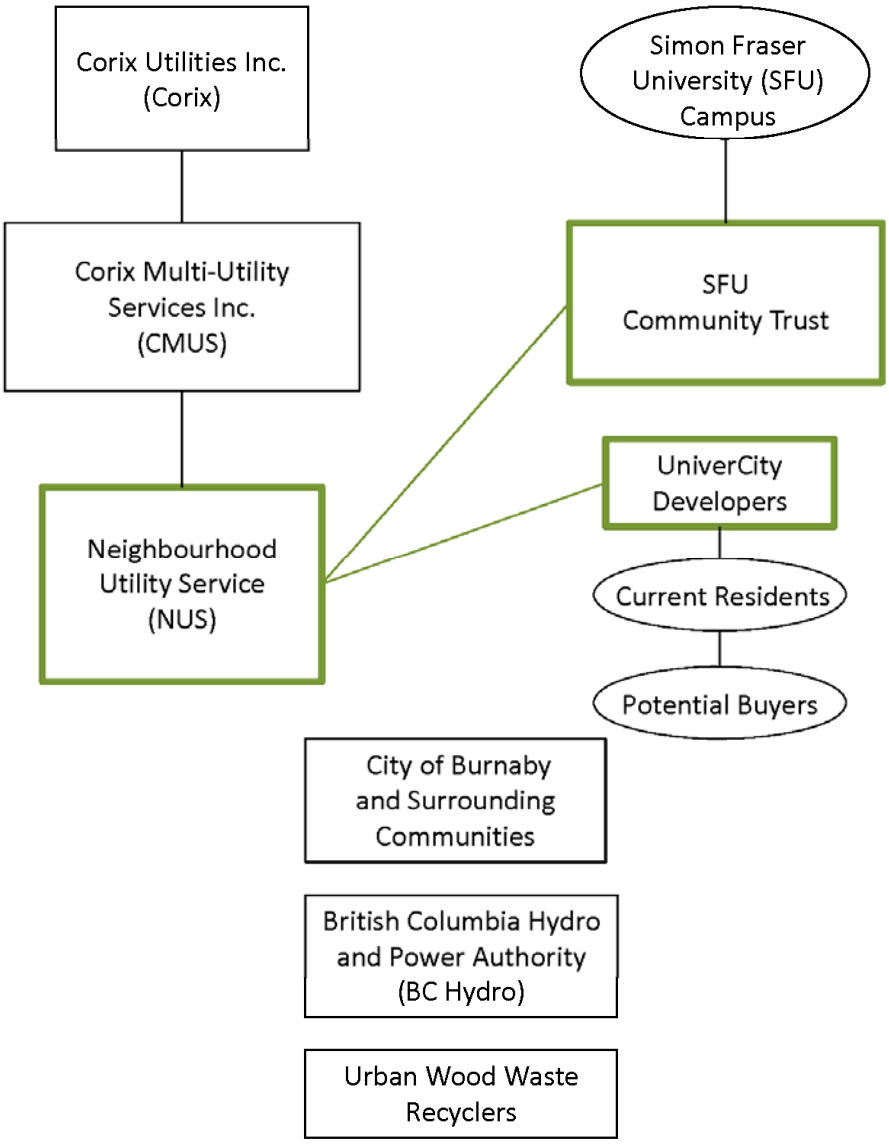
BC Hydro has entered into discussions with CMUS to provide a capital incentive to build the NUS at UniverCity. In addition to the CPCN, the NUS will require a building and development permit from the City of Burnaby to construct the central energy plant. Urban Wood Waste Recyclers have entered into discussions to develop a fuel supply agreement for the UniverCity NUS Biomass project. Both BC Hydro and Urban Wood Waste Recyclers have submitted Letters of Interest to Corix. (Exhibit B-1, Appendix B)

The proposed project will influence different groups of individuals which should be considered from the public interest perspective. The first group is the ratepayers who include current and future purchasers of Phase 3 and Phase 4 of the UniverCity development. The second group is made up of those in the surrounding area who may be affected by the project. The third group is comprised of the general public who stand to gain because of reduced carbon emissions and GHG levels.

The following diagram depicts the key stakeholders of the project.

DIAGRAM 1

KEY STAKEHOLDERS



Source: Derived from Exhibit B-1

2.3 Orders Sought

The Company is seeking the following:

1. A CPCN under Sections 45 and 46 of the *Utilities Commission Act* (*Act, UCA*) for the construction and operation of a proposed community-based district energy system at UniverCity, Burnaby, BC;

2. Approval under sections 56, 60 and 61 of the *Act* of the proposed revenue requirements, rate design and rates described in the Application; specific approvals requested in this area include:

    - A deemed capital structure of 60 percent debt and 40 percent equity;
    - Long-term debt financing costs estimated at 7.0 percent, subsequently revised down to 6.5 percent (Exhibit B-3-1, BCUC 1.17.4) and a ROE that is 200 points above the benchmark utility; (Exhibit B-1, p. 26)
    - A 20-year levelized rate structure and rate design of 60 percent fixed and 40 percent variable; and
    - A revenue deficiency deferral account which is to capture those portions of revenue requirements which are not recovered in the early stages of development. (Exhibit B-1, pp. 11-12)

2.4 Regulatory Process

The review of the Application was conducted by way of a written proceeding. The only Intervener was FortisBC Energy Inc. (formerly Terasen Gas Inc.). The Regulatory Timetable is summarized in Appendix A.

2.5 Evolving Energy Environment

This Application is an illustration of the evolving energy environment driven by both society at large as well as the initiatives and legislation introduced by the Provincial Government. One of the earlier similar examples is the Dockside Green Energy (DGE) Project in Victoria, BC. The

Commission granted a CPCN to the DGE in April 2008 to construct and operate a district energy system to provide energy service to the Dockside Green development built on the Inner Harbour in Victoria. (Order C-1-08)

In the *2007 BC Energy Plan* the Provincial Government introduced a series of initiatives intended to reduce GHG missions, improve energy efficiency and conservation and to achieve sustainability. In particular, the plan provided policy guidelines in the area of alternative energy that support the development of non-traditional sources of energy and encourage conservation to enable the Province to achieve electrical energy self-sufficiency by 2016.

CMUS states that the implementation of an alternative energy-based district energy system aligns with the Provincial Government's green energy objectives under the *2007 BC Energy Plan* and the *Clean Energy Act* (*CEA)* because it will result in energy savings and will ultimately provide a benefit of Green House gas (GHG) reductions to the whole community on Burnaby Mountain. (Exhibit B-1, pp. 6, 52)

Relevant sections of the *CEA* are reproduced in Appendix B.

3.0 PROJECT DESCRIPTION

3.1 Background and Need

The development is on land adjacent to the SFU campus. Property in the UniverCity development is leased by the SFU Community Trust (SFU Trust) to private developers on 99 year prepaid leases.

UniverCity is being developed in four Phases. The buildings in Phase 1 and Phase 2 have already been completed and are not part of this Application. Phases 3 and 4 were begun in 2011, with completion scheduled for 2019. When completed, the total development area is projected to be 206,572 square meters, of which 99 percent will be multi-unit residential and 1 percent commercial/office/daycare. (Exhibit B-1, p. 13-14)

CMUS states that SFU Trust has identified the NUS as one of the ways to enhance sustainability of the UniverCity community. Developers of Phase 3 and Phase 4 are required to adhere to a set of green building requirements. The Trust's objectives are to provide community residents and businesses with cost-competitive thermal energy thereby enhancing the environmental performance of the development. CMUS submits that the NUS will be the exclusive provider of thermal energy services for both space heating and domestic hot water for Phases 3 and 4 of UniverCity, as well as Parcel 25. (Exhibit B-1 p. 13) CMUS also states that the City of Burnaby's Bylaw No. 12760 requires the developer to comply with the UniverCity Design Guidelines and Requirements. The Green Building Requirements in that Bylaw also require the developers to build a thermal energy system that is compatible and able to connect to the NUS and prohibits them from using electric resistance heating. (Exhibit B-4, BCUC 2.2.1, 2.2.2)

3.2 Load Analysis and Energy Demand Forecast

Based on the development schedule as provided by SFU Trust and anticipated energy intensities of the expected types of buildings, CMUS estimates the peak heating load at 5.7 MW with annual energy sales of 14,020 MWh. The annual demand forecast reflecting the build out of new units

over the period is listed in Table 1 (below).

Annual Demand Forecast Table 1

ENERGY DEMAND (MWh)	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Net incremental demand	1,170	780	796	3,138	518	1,403	1,839	2,574	1,802	
Energy sales		1,170	1,950	2,746	5,884	6,402	7,805	9,644	12,218	14,020

Source: (Exhibit B-1, p. 16)

CMUS states that this data was used to construct the load duration curve to facilitate proper sizing of the energy system to satisfy load requirements. (Exhibit B-1, pp. 14-16)

CMUS has noted that the demand forecast has a high level of uncertainty and will require actual operating experience before the energy demand can be forecasted with any degree of accuracy. In fact, CMUS states that it has no assurance that it will achieve the projected customer base. In addition, the developer of each building will have the option of implementing onsite efficiency measures. The potential exists for the efficiency of the building to be increased with a corresponding decrease in energy use from the CEP. (Exhibit B-1, pp. 24-28)

3.3 Project Alternatives

3.3.1 Screening Analysis

CMUS has focused the screening analysis on alternative energy sources for fuelling the CEP. The following scenarios were modelled:

- Local Sewer Flows;
- Energy from the ground source heat pumps (GSHPs);
- Waste energy captured from the data centre (Data Centre);
- Available woody residues (Biomass); and
- Natural Gas in a co-generation scheme (Cogeneration)

CMUS presented a screening analysis of the above alternatives compared to a base case of natural gas heating. The local sewer option was combined with the GSHPs because the Company claimed there was insufficient heat recovered from the sewer system alone. The screening analysis criteria were:

- Land Area for plant
- Alternative energy delivered
- Natural Gas and/or electricity used
- Inputs
- Maintenance and Staff Costs
- Capital Costs
- Natural Gas costs
- Electricity Cost
- Alternate Fuel Costs
- Payback in years at current utility pricing
- Payback in years at future utility pricing
- Greenhouse Gas savings

CMUS states that payback times for the Data Centre and the Biomass option were under 20 years, while the Cogeneration option was approximately 38 years and the Sewer/GSHP was greater than 50 years. GHG savings for the Sewer/GSHP, Data Centre and Biomass were approximately 2,400 tonnes as compared to the natural gas and electricity base case, while the Cogeneration option produced 4,300 additional tonnes over the base case. (Exhibit B-1, p. 17)

Based on results of the screening analysis, CMUS eliminated both the sewer and the Natural Gas Cogeneration options. The Biomass and the data centre heat pump options were selected for further analysis. (Exhibit B-1, p. 19)

For the Data Centre option, CMUS considered using the waste heat from SFU's new data centre. The new facility is part of a five year capital plan prepared by SFU in 2008. A funding application for the upgrades to the building to house the data centre was not approved. Consequently, SFU is continuing to develop the new data centre in phases, but there is currently no approved capital budget and the development plan is 1-2 years behind schedule. Accordingly, the Company suspended consideration of the data centre due to the development risk, but states that it may look at it again if the data centre proceeds. (Exhibit B-3, BCUC 1.7.1, 1.7.2, 1.7.2.1, 1.7.2.2)

As a result of the screening analysis, CMUS provided a further detailed technical and cost analysis of its proposal to use Biomass for the base load energy for the permanent CEP. (Exhibit B-1, p. 33)

3.3.2 Potential for Combined Solution for UniverCity and SFU Campus

As an additional solution CMUS states that Corix, SFU and SFU Community Trust are collectively working together to assess the potential of a combined solution to provide thermal energy to UniverCity residents as well as the SFU campus (Combined Solution). This scenario calls for a Biomass based central energy plant to be implemented earlier than the smaller scale NUS CEP. CMUS reports that applications for assistance funding filed jointly with SFU Campus are being considered by various agencies. (Exhibit B-1, p. 21)

There is no specific plan in place at this time for the Combined Solution although its implementation could be as early as 2012. The Company confirms this would eliminate the need for the stand-alone NUS that is proposed in this Application. (Exhibit B-3, BCUC 1.11.2)

3.4 Project Scope

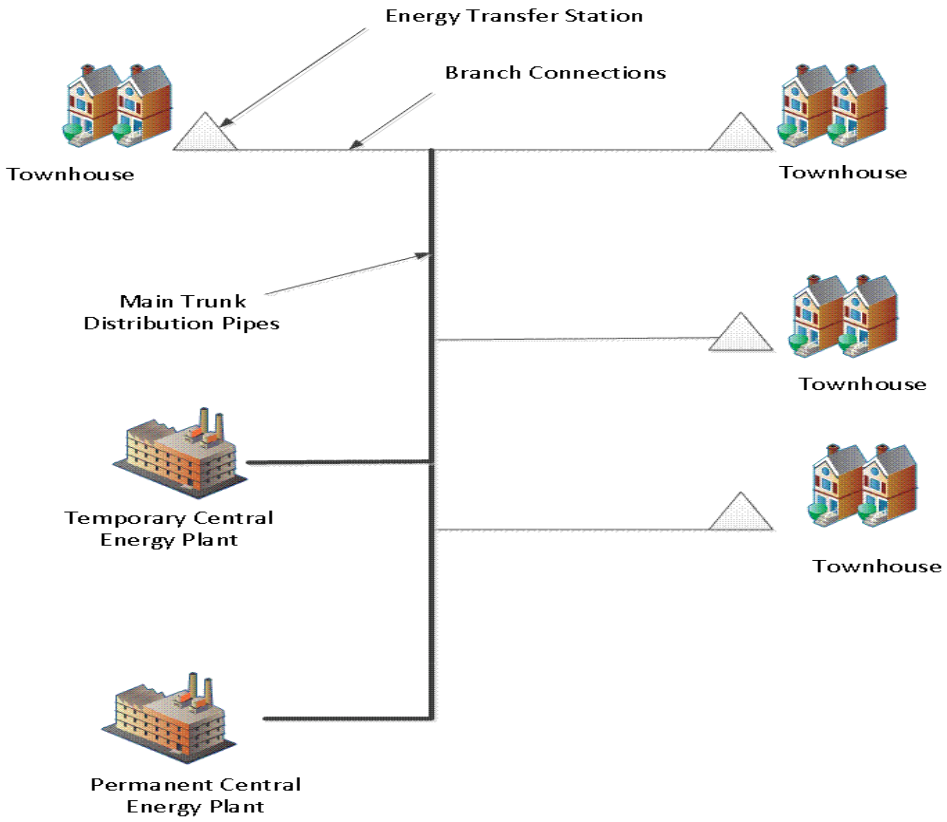
3.4.1 Description of District Energy System

The NUS plans to operate a DES to supply the space heating and domestic hot water to the required buildings from a central plant. As outlined in Diagram 2, the DES consists of a CEP and a Distribution System connected to buildings within the development. The CEP, which produces the

energy for domestic hot water and space heat for the UniverCity development, will be built in two steps. The first step is a temporary CEP, fuelled by natural gas which will be followed in 2016 with a permanent CEP fuelled by an alternative energy source.

DIAGRAM 2

DESCRIPTION OF DISTRICT ENERGY SYSTEM



Source: Derived from Exhibit B-1

CMUS is investigating Biomass as the fuel source for the permanent CEP, but indicates that it may consider other fuel sources. The permanent CEP will be situated in a different location from the temporary CEP. (Exhibit B-4, BCUC 2.40.2; Exhibit B-3, BCUC 1.37.1)

Energy from the CEP will be delivered to the residential units by the Distribution System, which will have the following three components:

1. Main Trunk Distribution Pipes
2. Branch Connections; and
3. Energy Transfer Stations (ETS)

(Exhibit B-1, p. 36)

3.4.2 Production Facilities

The Production Facilities generate the thermal energy for consumption by the residential units. This section describes these facilities, how they are fuelled and the disposal of waste from the combustion of biomass.

Initially, the Production Facility will consist of a temporary CEP, which, according to CMUS, will be constructed in the fall of 2011 with a capacity of 1.9 MW. The temporary CEP will be able to meet forecast loads up to 2013. At that time, additional boilers will increase the capacity up to 4.4 MW which will be sufficient to meet forecast loads up to 2016, after which the permanent CEP will be in place. (Exhibit B-1, pp. 3, 37, 48)

CMUS states that the boilers and variable speed pumps from the temporary CEP may be moved to the Biomass plant to provide peaking and backup power. All other items, including engineering, electrical and mechanical installations will not be reusable, although the building enclosure may have some salvage value. (Exhibit B-4, BCUC 2.19.3)

The proposed permanent CEP will be located on property south of the intersection of Tower Road and South Science Road. The site is currently owned by SFU and is zoned for institutional use. The BC Hydro Right-of-Way (ROW) is close to the proposed location as is the Telus ROW. Detailed discussions with BC Hydro and Telus concerning the ROWs were not completed at the time of the Application, but CMUS attests that it will work in close cooperation with SFU Trust on the ROW requirements. (Exhibit B-4, BCUC 2.40.1)

CMUS reports the proposed location of the permanent CEP is in a forested area with water stream crossings. CMUS notes that no environmental assessment has yet been conducted, although one will be completed before the detailed design of the permanent CEP commences. Furthermore, CMUS states that noise, air emissions, traffic impacts, and geotechnical assessments will not be completed until later in the design and engineering phase of the permanent CEP. (Exhibit B-1, pp. 46-47) A truck access route has not been determined at this time. (Exhibit B-4, BCUC 2.39.1)

CMUS has not provided specific details about the technology of the Biomass plant. The Company states that it is proposing a flexible approach to developing the NUS in order to accommodate changes in technology and allow decisions to be made when they are required to ensure the most appropriate technology is selected. (Exhibit B-3, BCUC 1.36.6) It further states that the technical solution for the NUS is flexible enough to incorporate the data centre, should it be developed. (Exhibit B-3, BCUC 1.7.2.2)

Also worthy of note is that CMUS recognizes the uncertainty related to evolving technologies and solutions and suggests an approach that would allow it to continue to explore and evaluate the best biomass solutions. (Exhibit B-4, BCUC 2.33.1)

Biomass Fuel Supply

To fuel the permanent CEP, CMUS is principally targeting woody biomass material from clean sources such as forestry residues and also municipal or urban generated woody residues or clean construction and demolition waste. CMUS estimates the amount of biomass (woody residue) required to meet the annual energy requirement at up to 8,000 “green” tonnes per year (approximately 4,000 “bone-dry” tonnes). CMUS states that it will require an estimated 11 deliveries per five day work-week in order to meet peak heating demand over a seven day period. (Exhibit B-1, p. 39)

CMUS has identified a number of risks associated with the fuel for the biomass systems. Included among these are variances in feedstock consistency, the impact of foreign substances and oversized feedstock as well as maintenance considerations. It claims that while these issues add additional risk to the operation of biomass system, they can be managed with careful design, good practice and operational experience. (Exhibit B-4, BCUC 2.11.1)

CMUS submits there are suppliers in the Vancouver area that collect, process and sell Biomass for boiler systems. (Exhibit B-1, p. 39) Included among these are the City of Burnaby, Urban Wood Waste Recyclers and several tree services companies. The Company states that it used preliminary discussions with potential fuel suppliers as a means of establishing the forecast price of $30/tonne as well as the availability of fuel. (Exhibit B-1, pp. 22-23) In response to numerous Commission staff information requests with respect to pricing and supply, CMUS submits that it will be undertaking a wood waste supply study in 2011 and continues by stating "we will continue to be in contact with potential wood suppliers to keep current on the availability of potential wood waste supply should a decision be made to proceed with a biomass solution". (Exhibit B-3, BCUC 1.12.9) While currently unable to estimate the amount of feedstock in the region, the Company believes it to be substantial. (Exhibit B-4, BCUC 2.18.2) With respect to pricing CMUS states that it has a high confidence level that the price for Biomass will fall between a range from plus 50 percent to minus 50 percent against the base case projections of $30 per ton. (Exhibit B-3, BCUC 1.15.1)

Waste Ash Disposal

CMUS states the biomass boiler will produce an estimated amount of bottom ash of approximately 220 tonnes per year. CMUS maintains that the testing of the bottom ash will be done regularly to prevent any potential contaminants to be land filled. (Exhibit B-3, BCUC 1.37.6) The ash can be used as a fertilizer if the testing is favourable, however CMUS has not completed any analysis as the fuel source is not yet determined. (Exhibit B-3, BCUC 1.37.1) As a result, the opportunities for potential salvage of the bottom ash remain unknown. If the bottom ash would not be suitable for beneficial use, it will be sent to the landfill. (Exhibit B-3, BCUC 1.37.6.3) Bottom ash which contains leachate levels in excess of the allowable provincial standards must be disposed of in a facility

licensed to receive this material such as the facility located in Princeton, BC. (Exhibit B-4, BCUC IR 2.37.3)

3.4.3 Thermal Distribution System and Energy Transfer Stations

The Thermal Distribution System (TDS) consists of all of the pumps, piping and ducting required to transfer the thermal energy from the Production Facility to the Energy Transfer Station (ETS).

The ETS are located in the residential buildings at the point of transfer between the Distribution System and the building's internal heating system. The key components of the ETS are:

- Shut off valves
- Pipes between the shut off valves and the heat exchangers used to provide heat
- Controls to regulate the flow of heat
- Energy meters
- Separate heat exchangers for space heating and domestic hot water

CMUS proposes a phased approach for both the TDS and the ETS implementation to match the planned development schedule of the residential units. (Exhibit, B-1, pp. 40-50)

3.5 Implementation Schedule

The implementation schedule for the NUS is driven by the development schedule set by SFU Trust. CMUS has provided a phased schedule covering a period of 10 years, through completion of build-out.

Development Schedule

Milestone	Date
DES required for the first of the Phase 3 buildings. DES consists of temporary NG facility with one boiler.	2011 2011
Additional Boiler required for temporary CEP	2013
Biomass Plant (1 Boiler)	2016
Biomass Plant (additional boiler)	2018
Completion of Phase 4 build out	2019

(Source: Exhibit B-4, BCUC 2.5.2)

4.0 PROJECT COSTS AND RATE STRUCTURE

4.1 Capital Costs

CMUS states that it completed a feasibility assessment of the project and provided a capital cost estimate for the NUS (Exhibit B-1, page 20 and 48), indicating that the total capital costs for the temporary and permanent plant is forecast to be $12.215 million over a period of 9 years.

Table 7 – Capital Costs Summary

In thousandsof dollars unless specified	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Buildings	$ 38	$ -	$ 29	$ -	$ -	$ 1,497	$ -	$ -	$ -	$ 1,564
Heating plant	448	-	321	-	-	4,244	-	597	-	5,609
UniverCity distribution	796	155	560	328	108	454	112	76	57	2,645
UniverCity ETS	231	210	142	464	208	321	248	409	162	2,397
Total capital	$ 1,512	$ 365	$ 1,052	$ 792	$ 316	$ 6,516	$ 361	$ 1,082	$ 219	$ 12,215

(Source: Exhibit B-1, page 20)

Included in the temporary plant costs of the initial year (2011) are solar thermal panels estimated at $110,000 and the project development cost of $90,000.

CMUS has applied a 5 percent optimization/reduction to both the Heating Plant capital and Distribution Piping System capital estimates while a 25 percent optimization/reduction is applied to the Energy Transfer Station capital estimate. The optimization estimates are intended to reflect the current construction market conditions as compared to those in previous years which were considered as a baseline for development of the infrastructure cost. CMUS claims that the capital cost estimate for the total Project has a P90 probability confidence level meaning that the total capital cost, 9 times out of 10, will be the within the estimated price. Given the CMUS' knowledge with these types of projects, the accuracy of the capital cost estimate for the CEP, the DPS, and the ETS has a Class 3 (-15 percent and +25 percent) level of accuracy. (Exhibit B-3, BCUC 1.46.2) CMUS also states that updates to the cost estimates and detailed breakdown of the various cost components will be provided to BCUC upon completion of the 50 percent design. (Exhibit B-3, BCUC 1.46.6)

4.2 Capital Contribution and Incentives

Under the terms of the Infrastructure Agreement between Corix and SFU Trust, developers will make a contribution to the capital costs at the rate of $1.00 per square foot of buildable area on each development parcel. CMUS indicates that this developer contribution (connection fee) is not affected by the implementation of only the temporary CEP as the developers need to pay the connection fees at the time of the lease closing(Exhibit B-4, BCUC 2.12.1.2).

In addition, CMUS states that this Project is eligible under BC Hydro's Power Smart Sustainable Communities Program which supports the implementation of a DES utilizing alternative energy sources for heating. (Exhibit B-1, p. 21) This direct financial incentive would reduce CMUS' funding requirement and improve the payback for the DES. A Letter of Intent filed by BC Hydro is included as Appendix B in the Application and Corix and BC Hydro are in the process of developing an Incentive Agreement. CMUS has included an estimated capital incentive of $1.3 million in 2016 upon the development and implementation of an alternative energy system. (Exhibit B-1, p. 21) Although the agreement is not explicitly subject to approval of the entire project by the Commission, CMUS insists that it does not believe BC Hydro would negotiate an agreement if only the temporary solution was approved for development. (Exhibit B-4, BCUC 2.14.1)

CMUS is also seeking other grant opportunities that could provide further financial benefits. However, details of the potential grants are not yet available. (Exhibit B-1, p. 21)

4.3 System Operating Costs

CMUS defines operating, maintenance and administrative costs to include costs for NUS employees salaries, training, office supplies, subcontractors and maintenance and repair services provided by maintenance personnel. (Exhibit B-1, p. 22) Since the central energy plant will be built over time as new residential load is added, CMUS explains that the facility may not require a full-time operator until the biomass boilers are installed in 2016.

While the temporary CEP is operating on one or two boilers, CMUS is confident that it would be registered as a "General Supervision" plant meeting the requirements of section 55 of Safety Standard Act BC Reg. 104/2004. As such, limited off site supervision via remote access and alarm monitoring will be acceptable. (Exhibit B-3, BCUC 1.14.1; Exhibit B-4, BCUC 2.22.1) General supervision allows for scheduled inspections rather than 24 hour supervision and is a key to a viable business case for this scale of system. However, CMUS states that the final ruling of this status is determined solely by the BC Safety Authority and can only be finalized once equipment for the permanent CEP is selected. (Exhibit B-1, p. 44) CMUS estimates that the initial operations and maintenance cost of the temporary boiler plant will be subcontracted at a cost of $30,000 per year, which includes basic emergency coverage and two site visits per week. (Exhibit B-1, p. 22)

Insurance costs are estimated at $4,000 per year while office and administration costs are budgeted at $50,000 per year. These include legal services, accounting, tax services, auditing, human resources, and regulatory costs.

CMUS states that operating costs will increase in 2017 after implementation of the biomass plant. The bulk of the operating costs will be related to the full-time operator at $200,000 per year plus 2 percent annual escalation. A breakdown of the system operating costs is detailed in Table 9 of the Application:

Table: 9 – Annual O&M Costs

OPERATING COSTS (2009$)	2012	2017
Operating labour and supervision	30	200
Service parts	-	8
Licensing	-	2
Repair/technical service	-	3
Chemicals / water treatment	-	1
Tools and equipment	-	2
Major repairs	-	6
Inventory parts	-	11
Commissioning	-	18
Insurance	4	18
Office and admin	50	50
Total operating costs	84	319

(Source: Exhibit B-1, p. 22)

4.4 Debt and Equity Financing

4.4.1 Capital Structure

CMUS states that it expects to finance 60 percent of the rate base with deemed debt and the remaining 40 percent with common equity. (Exhibit B-1, p. 24) CMUS indicates that long-term debt will be available through an inter-company demand loan from CMUS to the NUS under which it may borrow, repay and re-borrow funds as required. Because the NUS will be financed using an intercompany loan, CMUS indicates that there will not be any fees, security requirements or covenants. (Exhibit B-3-1, BCUC 1.17.2)

Corix has borrowing capacity of $150 million through a $100 million revolving credit facility with a $50 million accordion (Exhibit B-1, p. 9) although CMUS states that none of the capital structure will be financed by short term debt. (Exhibit B-3-1, BCUC 1.17.3) The Commission Panel notes that "The (Ontario Energy) Board has determined that short-term debt should be factored into rate setting, and that a deemed amount should be included in the capital structures of electricity distributors. The short-term debt amount will be fixed at 4 percent of rate base." (Exhibit A-2-1, p. 9)

CMUS rejects the appropriateness of including a 4 percent deemed short-term debt for the NUS capital structure on the basis that "the assets that are being financed are long-term assets and should be financed with long-term debt." CMUS further adds that the "model currently projects no working capital in the project since working capital is expected to be small in relation to the rate base. As such, the short-term debt requirements for the project are negligible relative to the overall financing requirement and would have a negligible impact on the overall debt rate for the project." (Exhibit B-4, BCUC 2.26.1)

4.4.2 Debt Cost

CMUS indicates that all debt will be financed at the same interest rate. (Exhibit B-3-1, BCUC 1.17.3) CMUS is proposing that the interest rate be equal to the prevailing Benchmark Ten-Year Government of Canada bond yield at time of funding plus a credit spread of 300 basis points. This credit spread is based on the creditworthiness of SFU and the proposed capital structure. CMUS notes that SFU is rated AA (low) by Dominion Bond Rating Services and Aa2 by Moody and the credit spread for entities with that credit risk is in the range of 200 basis points. CMUS further submits that the "NUS warrants [an incremental 100 basis points in] credit spread over SFU because of the different security supporting the debt and the incremental risk associated with the project, including, but not limited to, development risk, utility operations risk and customer credit risk." Based on the current Benchmark Bond Yield, the proposed interest rate is 6.50 percent. (Exhibit B-3-1, BCUC 1.17.2 and 1.17.3) CMUS is also proposing to fix the debt rate for a ten-year period with any adjustments to the debt rate to be reflected in the revenue requirement applications that will be filed periodically with the Commission. (Exhibit B-3-1, BCUC 1.17.4.1)

Worthy of note is that the OEB "Cost of Capital Parameter Updates for 2011 Cost of Service Applications for Rates Effective January 1, 2011" dated November 15, 2010, indicates a Deemed Long-term Debt Rate Forecast that includes an A-rated Utility Bond Yield Spread September 2010 of 1.539 percent for 30-year debt. (Exhibit A2-2)

4.4.3 Return on Equity

CMUS believes that the NUS is a start up company and does not share the advantages of the benchmark utility. As such, CMUS is requesting a risk premium of 200 basis points above the benchmark utility (FortisBC Energy Inc.). (Exhibit B-1, pp. 24-26) CMUS states that the proposed risk premium is reasonable in order to compensate for the additional development business risks faced by the NUS utility as described in Section 4.7.

Directive No. 5 in Order C-1-08 for Dockside Green Energy (DGE) approved an ROE that is 100 basis points premium over the benchmark ROE. CMUS argues "that using the 100 basis points premium granted to DGE in 2007 as a point of comparison is not an appropriate measure of the risks associated with small utility operations such as NUS" and "that the more appropriate comparison for determining the relative risk of the NUS is against the larger established utilities regulated by the Commission". (Exhibit B-3-1, BCUC 1.20.1, 1.20.2)

In addition, CMUS argues that "the agreed ROE (between the utility and SFU Trust) should be given considerable weight by the Commission". (Exhibit B-3-1, BCUC 1.19.1) BCUC IR No. 2.29.1 notes that SFU Trust and the NUS customers are different stakeholders in this project and may not share the same interests with respect to the ROE. When asked to explain to what extent those interests may be similar or divergent, CMUS explains that since potential customers of housing units would factor the costs for energy in their purchase decision, it ensures the Trust and the customers are "aligned in their desire to have affordable energy rates that ensure the long term viability of the community and of the utility that provides service to that community". Thus, CMUS believes there is "a very clear and strong alignment of interests between SFU Trust and the NUS customers." (Exhibit B-4, BCUC 2.29.1)

4.5 Revenue Requirements

CMUS states that the financing cost of the capital investment represents the largest component of the Cost of Service. Operating costs and fuel costs each represent a significant portion as outlined in Table 14 (below).

Table:14 - Revenue Requirement

In thousands $ unless specified	2012	2013	2014	2015	2016	2017	2018	2019	2030	2031
REVENUE REQUIREMENT										
Operating costs	89	90	92	94	96	374	381	389	483	493
Biomass	-	-	-	-	-	118	149	193	275	281
Natural gas	58	103	149	331	368	66	85	110	163	167
Electricity	4	8	12	27	30	26	33	43	61	63
Total fuel costs	62	110	161	357	398	211	267	346	500	510
Property taxes - building	1	1	1	1	34	34	34	34	34	34
Property taxes - distribution	9	12	16	23	26	48	50	55	55	55
Property taxes - total	10	13	18	25	60	82	84	89	89	89
Depreciation	32	39	62	74	81	224	229	260	261	261
Interest	59	68	110	120	128	365	360	385	258	247
Return on equity	65	75	120	132	140	400	394	422	283	271
Income tax before deferral	-	-	-	-	-	-	-	-	141	143
Total capital costs	155	182	291	327	349	988	984	1,067	943	922
Total cost of service	**316**	**396**	**562**	**803**	**904**	**1,656**	**1,716**	**1,891**	**2,015**	**2,015**
Franchise fees - total	**5**	**9**	**12**	**26**	**29**	**35**	**43**	**54**	**63**	**63**
Revenue requirement	**321**	**405**	**574**	**829**	**932**	**1,691**	**1,759**	**1,946**	**2,078**	**2,078**

(Source: Exhibit B-1, p. 27)

CMUS also proposes that the non-controllable costs be flowed-through in future rates, which include:

1. changes in commodity costs including biomass, natural gas and electricity;
2. changes in operating costs resulting from changes in regulatory and legal requirements; and
3. any changes in law.

(Exhibit B-1, p. 46)

4.6 Rate Design

CMUS is proposing a fixed/variable rate structure that recovers 60 percent of forecast revenues from strata through a fixed monthly charge per square meter and 40 percent through a volume-based rate. To support its proposed rate structure, CMUS points to both the utility's cost structure and the high level of uncertainty in forecasting energy demand. (Exhibit B-1, p. 28)

CMUS is requesting "a larger portion on the fixed charge in recognition that the majority of the costs associated with providing the energy are fixed costs and to increase the stability of utility revenues given the uncertainty of energy use with new developments." This is in recognition that "a larger portion of the customer charge assigned to the variable portion of the customer rate will encourage more energy conservation." (Exhibit B-3, BCUC 1.27.3) CMUS submits that "forecast risks can be partially mitigated through higher fixed charges." (Exhibit B-4, BCUC 2.34.3)

CMUS proposes to bill each strata based on the overall buildable area of the strata's building(s) and the consumption as metered within each building. CMUS will not be responsible to allocate energy costs at the individual suite level within each strata. (Exhibit B-1, p. 28)

4.7 Project Risk

CMUS describes the business risks inherent in this project to include:

- Real estate development risk - due to the volatility of supply and demand for residential housing in Greater Vancouver;
- Developer/customer connection risk - connection by developers is not mandatory and therefore the NUS does not have exclusive rights to the sale of energy within its territory;
- Small company size risk - due to illiquidity of shares and limited geographic and customer base;
- System performance risk - related to new technology, weather, forecast error and other variables which are unknown at the time of planning and developing the system;
- Construction cost risk;
- Fuel supply and fuel cost risk;
- Operating cost risk; and
- Public acceptance risk.

CMUS discusses several mitigating factors for each identified risk and also states that the equity-to-debt ratio along with the proposed ROE discussed in Section 4.4 above are designed to provide the utility owner a fair return on investment in consideration of all these risk factors. (Exhibit B-1, pp. 24, 44-46)

4.8 Proposed Levelized Rate

CMUS proposes to implement a levelized rate structure in order to reduce the cost to customers in the early stages of the project and to fairly distribute the costs to all customers over a 20-year period. Under these terms, the utility would agree to under-recover its cost of service during the early stages of development, record these amounts in a deferral account, and recover the value of the deferral account by the end of the 20-year period. (Exhibit B-1, pp. 27-28).

Under this proposal, the levelized rate over the entire 20-year period is estimated to be $159.76/MWh (before escalation) in accordance with the Application. CMUS subsequently adjusted this rate to $155.84/MWh (Exhibit B-4, BCUC 2.35.4) and confirms it is seeking approval for this rate. CMUS expects that the proposed levelized rate would be subject to change as the factors impacting the financial assumptions become known. (Exhibit B-3-1, BCUC 1.25.1)

5.0 KEY ISSUES

5.1 Introduction

Having laid out the project description, the justification and the estimated costs, the financing, the risks, the revenue requirements and proposed rate structure for the CMUS UniverCity Project, we will now explore the issues related to the Application. We will start by examining the Project in terms of the adequacy of consultation and then address issues related to alignment with the *Clean Energy Act*, Biomass fuel cost and availability, load analysis and energy forecast. Additionally, our examination will include a review of the impact of our decision on potential agreements with BC Hydro and SFU Trust and the risk of stranded assets.

Finally, the Commission Panel will discuss whether the project description and project cost estimates are sufficiently robust to justify moving forward with the Project before considering in section 6.1 the matter of whether approval is in the public interest. We believe that the examination of these issues will support the Panel's position that in spite of being positively disposed to the Application, there is insufficient evidence on the record to support approval for the Project in its entirety at this time.

5.2 Adequacy of Public Consultation

CMUS states that its public consultation process was designed to ensure interested individuals from the surrounding communities were notified and provided the opportunity to provide input into the decisions of the NUS as the Project has developed. (Exhibit B-4, BCUC 2.1.1) CMUS reports that two open house sessions were held over the period of December 2008 to March 2009 and advertised in local newspapers with invitations for the first event sent to residents and businesses within a four kilometre radius. The first of these had 16 attendees, almost all of whom were current UniverCity residents, and was designed to provide the public with an overview of the project and information about the NUS and its benefits. The second, with 9 attendees (again primarily UniverCity residents), was focused on results of a screening analysis of a number of

thermal energy technology concepts and a variety of energy sources which included Biomass. A third Open House was planned during the CPCN Application process to present information related to the next steps of the NUS development and future oversight of its operation by the Commission. To date this has not taken place. (Exhibit B-1, pp. 34-35)

CMUS reports that the feedback from members of the community attending the open houses was very positive and individuals were strongly interested and expressed support for a DES with renewable technology. It further reports that there were no concerns raised with respect to the technologies being considered or the proximity of the central energy plant to the residential community. The only concern which arose related to the number of trucks which may be required to move the Biomass to the CEP. CMUS notes these concerns were reduced when CMUS and SFU Community Trust, in presenting results of a preliminary fuel analysis, identified that two trucks a day would be sufficient to supply fuel to run the facility. (Exhibit B-4, BCUC 2.1.3)

Commission Determination

The Commission Panel finds that CMUS has taken steps to ensure that the public was adequately consulted with regard to the Project. However, in spite of the steps taken, the open houses were sparsely attended and that attendance was primarily limited to an audience of existing Phase 1 and 2 UniverCity development residents. As a result, the consultation efforts can best be described as narrow in scope as there was little participation from the surrounding community. Nonetheless, the Panel acknowledges that CMUS has made reasonable attempts to notify the public of planned open houses. **Accordingly, the Commission Panel has determined that the public consultation undertaken by CMUS to date has been satisfactory. Further, the Panel directs CMUS to schedule the planned third open house once it has determined more clearly the form and technology to be employed by the NUS.**

5.3 Alignment with *Clean Energy Act* and Provincial Government Policy

Section 46(3.1) of the *UCA* requires the Commission in deciding to issue a CPCN to consider and be guided by British Columbia energy objectives, the most recent long-term resource plan filed by the utility under section 44.1 of the *Act* and the extent to which application is consistent with requirements under sections 6 and 19 of the *CEA.* A discussion of each of these follows.

5.3.1 Alignment with British Columbia's Energy Objectives

Section 2 of the *CEA* sets out British Columbia's energy objectives (listed in Appendix B). Those most relevant to this proceeding include (d), (g), (h), (i) and (j).

CMUS notes that the NUS project is in alignment with many of these objectives and within the Application presents details of the GHG reductions which will result once the Biomass plant is implemented. (Exhibit B-1, p. 52)

The Commission Panel is in agreement with CMUS and notes that the project is in alignment with many of the most relevant objectives listed above. First, the type of technology being proposed by CMUS for this project is very innovative and is designed to support energy conservation and efficiency through the use of clean, renewable resources. As a consequence, the NUS, when fully operational will contribute to reaching BC GHG emission targets. Moreover, by relying on biomass for fuel the project clearly aligns with objectives (h), (i) and (j) by reducing waste and promoting the switch from natural gas heating to one with decreased GHG emissions on a community wide basis.

5.3.2 Approved Integrated Resource Plan

CMUS has not yet filed a long-term resource plan.

5.3.3 Requirements under Sections 6 and 19 of the *Clean Energy Act*

Section 6 of the *CEA* applies to electric utilities only and is not relevant to this Application. Section 19 of the *CEA* applies to BC Hydro and prescribed utilities. CMUS is not one of the prescribed utilities.

Commission Determination

The Commission Panel finds that the Application is generally consistent with British Columbia's energy objectives as outlined in the *CEA*. The project provides for an interim natural gas based solution for the development followed by an environmentally friendly Biomass (or similar green heating alternative) once the development is sufficiently large enough to justify it. Once in place, the permanent heating plant will result in significant reduction of GHGs and will contribute to the attainment of BC greenhouse gas emission reduction targets.

However, the Panel would like to point out in making this finding that this alignment is contingent upon the fuel being Biomass and CMUS being able to source Biomass fuel that produces significantly less GHG than natural gas. As outlined in the *BC Energy Plan* (p. 25), the amount of GHG produced from Biomass is very much dependent upon the source of fuel.

5.4 Availability and Costs of Biomass

Both the cost of Biomass fuel and its availability are important considerations in this Application. As noted in Section 4.5 of this Decision, fuel costs largely made up of Biomass represent a significant part of the overall cost of service for the permanent CEP. The Commission Panel has concerns as to whether CMUS has performed sufficient due diligence at this point to ensure availability and support the cost projections for Biomass fuel.

The position taken by CMUS with respect to the cost and supply of suitable Biomass fuel relies very strongly upon preliminary discussions the Company has had with potential fuel suppliers rather than a comprehensive review of potential sources and expected costs both current and future. It is the intention of the Company to perform a wood waste supply study later in 2011 and keep current on any changes thereafter. In the interests of creating a higher level of certainty with this Application, the Panel observes that there would have been a significant benefit in performing the supply study and completing supply contract negotiations prior to this submission of this CPCN. This would allow the Applicant to firmly substantiate both supply and price for this key requirement. However, given the time span before construction and the fact that no firm decision has been made on a Biomass solution for the permanent CEP (to be discussed further in Section 5.8), the lack of firm details is understandable. Nonetheless, we remain concerned with the lack of certainty on this important element of the project and are reluctant to rely on what have been described as preliminary discussions.

The Commission Panel is also concerned that given the time span between this CPCN and the timing of construction of the permanent CEP, the potential for variability with respect to both availability and the resultant price to be paid for suitable Biomass could be significant. CMUS reports that a similar circumstance occurred with another Corix project, Dockside Green in the Victoria area. In this instance the economic downturn resulted in the project construction slowing, reduced loads relative to forecast and a shortage of suitable wood waste. Consequently, the project is still running on natural gas as it is not yet practical to run a central Biomass facility. (Exhibit B-3, BCUC 1.40.1, 1.40.2) The Panel notes that because of the long delay between the Application and construction it is questionable whether such unforeseen circumstances would not affect the current project.

Commission Determination

The Commission Panel finds that there has been inadequate rigor applied to date to investigate and secure sourcing and pricing for suitable fuel for the proposed Biomass permanent CEP. We understand the circumstances behind CMUS not moving forward at this early date with more firm

details. However, because of their importance to future ratepayer costs and choice of alternative energy system, the Commission Panel remains concerned that this adds to the uncertainty related to this Application.

5.5 Load Analysis and Energy Forecast

The Panel is concerned that too much remains unknown to accurately estimate customer requirements and demand for NUS based energy. We further note that CMUS acknowledges that the demand forecast is subject to a high level of uncertainty and that the volume based revenue may not fully offset the cost of the service and it could experience a revenue shortfall. (Exhibit B-1, p. 28)

One unknown factor is the number of units that will be connected to the NUS, which CMUS has estimated based on the development schedule for Phase 3 and 4. While presales of the first two buildings, as reported by CMUS, indicate that initial take-up is good, there remains uncertainty about units that are scheduled for construction in the future. CMUS notes that this development risk affects the utility's ability to predict energy use from those buildings that attach to the NUS. (Exhibit B-4, BCUC 2.31.2, 2.31.4)

In IR 2.31.4, CMUS acknowledges that the development risk is significant in these types of developments and cites the example of Dockside Green, where development has stalled and the expected build-out may take twice as long as initially predicted. However, the Company states that this risk can be mitigated in part by its phased approach to development. The Panel concurs that some of the development risk may be mitigated by a phased approach to the development of the CEP.

As a further unknown factor, the Panel notes that developers may be incented to provide new and novel alternative heating technologies and energy efficiencies due to the requirement to meet energy efficiency targets provided by SFU Trust and to enhance the saleability of their units. This could have the effect of reducing demand for energy from the NUS even further. Adding to this

risk, the implementation of any supplementary energy sources at the building level is at the sole discretion of the developer. Accordingly, there is a high level of uncertainty whether this energy can be included in the overall NUS system design because the NUS must be designed and built before CMUS could complete any negotiations with developers. However, CMUS takes the position that solar thermal would be able to supply less than 10 percent of non-peaking load. (Exhibit B-3, BCUC 1.29.1) We recognize that it is difficult to predict how much, if any, of these enhancements will be implemented by the developers. However, the demand forecast provided by the CMUS, to the extent that they do not include any contingency of this nature at all, may be overly optimistic.

Commission Determination

The Commission Panel finds that the energy forecast submitted by CMUS is not sufficiently credible at this stage to base firm decisions as to the size requirements for the permanent CEP or the customer rates which result.

While CMUS has identified and described sources of uncertainty with respect to load and energy forecasts, we find that it has not provided sufficient analysis of the impact of those uncertainties on rates. The Panel notes that if these uncertainties materialize, they may drive down demand for energy from the NUS, and consequently there is potential for higher rates than those predicted by CMUS.

5.6 Consideration of Agreements with SFU Trust and BC Hydro

The importance of financial incentives and related agreements has been raised by CMUS within the Application. CMUS has stated that anything short of a full approval of permanent CEP in the CPCN "could impair or frustrate the development of the project, particularly if this limited approval resulted in the withdrawal of funding." (Exhibit B-4, BCUC 2.12.1.1)

CMUS states that the Biomass plant is the core of this project and the planning, design, funding and public consultation are based on it. CMUS notes that under the terms of the Infrastructure

Agreement in place with SFU Trust, developers are required to contribute $1.00 per square foot of buildable area to the NUS on each development parcel. This, as outlined in Table 8, will offset $2.223 million in development capital costs. (Exhibit B-1, p. 21) The Commission Panel acknowledges that the project is based on the development of an alternative energy plant but notes that CMUS, in answer to BCUC IR 2.12.1.2, confirms that the connection fees would not be affected by the natural gas temporary solution as they are paid when the lease closes. Moreover, the Commission Panel in reviewing the Infrastructure Agreement (submitted confidentially in Exhibit B-1, Appendix A) sees nothing which would put this agreement at risk if only the temporary CEP were approved at this time. Because of this, the Commission Panel is not persuaded that a granting of a CPCN at this time is a requirement of the agreement with SFU Trust or will affect funding.

With respect to BC Hydro's interest in the project, CMUS reports that the agreement in place is not subject to BCUC's approval of the entire project. However, as noted earlier, the Company believes that BC Hydro would not start to negotiate an incentive agreement if only a temporary solution was approved. As outlined in Section 4.2, the incentive agreement with BC Hydro would only be payable upon the implementation of an alternative energy system which is not scheduled until 2016. As the Commission Panel understands it, the Parties are currently in the process of developing an incentive program which may be completed prior to the timing of this Decision. CMUS has presented no evidence to suggest that an immediate granting of a CPCN for the permanent CEP will be a term of the agreement. Therefore, the Panel is not persuaded that the granting of a temporary CEP only will nullify or even put at risk any incentive agreement which may be in place with BC Hydro.

5.7 Risk of Stranded Assets

The fact that the Application proposes to build a temporary CEP which will be replaced by a permanent CEP raises a concern with respect to stranded assets. CMUS states that the temporary CEP will have up to three gas fired boilers which it anticipates moving to the permanent CEP once it is completed and use for peaking and backup. CMUS further states that a portion of the temporary

plant cost will be stranded but this will be offset by the savings which will be realized by deferring the completion of the permanent plant before there is sufficient load build-up. (Exhibit B-1, pp. 37-38)

The potential for stranded assets was explored by the Commission in IR 1.36.1 which inquired as to the anticipated value of the stranded capital related to the temporary plant and details in table form outlining the breakout of facility assets, expected recovered costs and the remaining stranded value. CMUS did not provide a response to this query. This was again addressed in BCUC IR 2.19.3 which again asked for similar information. In its response CMUS indicates that "all costs associated with the equipment ($104,000) will be used in the permanent plant." It is understood that this represents boilers and speed pumps. CMUS further notes that all other costs such as engineering, electrical and mechanical installation would be stranded costs. CMUS did not provide details as to the residual value of the assets, nor any expected recovery costs in table form as requested. Further to this the Commission in IR 2.19.4 inquired as to whether CMUS had considered selling some of the stranded assets as a means of reducing the burden on the ratepayer. CMUS responded by stating that it estimates that 40 percent of the $309,000 estimated cost of the temporary plant related to boilers, controls, metering equipment as well as the container housing the plant would have salvage value but did not indicate what that value would be. CMUS continued by stating that the boilers could be used as back-up capacity for the permanent CEP.

Commission Determination

The fact that CMUS has not provided complete information with respect to BCUC IRs indicates to the Commission Panel that the Company has made no firm decision as to the disposition of assets related to the temporary CEP at this time. It appears, based on the information provided, that the use of the boilers as backup in the permanent CEP is a possibility but not a certainty. This lack of certainty is underlined in the CMUS answer to BCUC IR 2.19.4 which states that it had considered the possibility of selling assets but "[t}he boilers <u>may</u> also be used as back-up capacity in the permanent biomass plant" (emphasis added).

The Commission Panel notes that the cost of the temporary CEP as outlined in Table 24 of the Application is $637,000. Based on the information provided, the Commission Panel is unclear as to how much of this amount will result in stranded assets once a permanent CEP is constructed and what impact this may have on future rates. It is this lack of certainty and lack of specific detail which cannot be reconciled that raises concerns with the Panel. **Accordingly, the Commission Panel finds that at this point the amount of rigor CMUS has put into analysis of the potential for stranded assets related to the temporary CEP has been inadequate.**

5.8 Adequacy of Project Description

A key element in a review of a CPCN application is the level of detail provided by the applicant and the level of certainty which can be ascribed to the project components. The Commission Panel has concerns as to whether this requirement has been adequately satisfied with this Application.

As outlined in Section 3.0, the CMUS Application contemplates what is described as a phased in approach to the DES proposed for the UniverCity Project. This involves the construction of a temporary CEP to serve the initial load and a permanent CEP projected to be constructed by 2016 once the customer load has reached sufficient volume. While CMUS has been very specific with respect to how it will build a temporary CEP, the same cannot be said for the permanent CEP proposed to be constructed in the future. CMUS has repeatedly declined to commit to a firm solution for this installation throughout the evidentiary record. The position taken by the Company is that a firm decision is not required until a date closer to actual construction. However, from the evidence presented it is clear that a number of different options have and are still being considered.

CMUS, in its Application, notes that both Biomass and the potential for Data Centre Heat Pumps were considered for further evaluation. However, because of uncertainty with whether the Data Centre would proceed, only the Biomass solution was recommended for detailed technical and cost analysis. In spite of this, CMUS states that because of the phased approach to the NUS and the fact that the alternate technology comes later there would be an opportunity to re-evaluate the

potential of using waste heat recovery from the Data Centre if it were constructed prior to implementation of this alternative energy permanent solution. (Exhibit B-1, pp. 19-20) In response to BCUC 1.7.1 the Company reports it continues to work closely with SFU and holds this open as a possible option if and when a decision is made regarding the Data Centre. Further, in response to BCUC 1.7.3, CMUS asserts that if it is developed and proves viable it "would implement this solution and adjust customer rates accordingly." Additionally, CMUS has been clear that it does not intend to file a new CPCN in the event the Data Centre were to go forward but would file "updates to the CPCN at the points in time where decisions are required on selecting one or more of the alternative energy systems to develop". (Exhibit B-2, FortisBC 1.1.1)

In addition to the Data Centre option CMUS has also outlined the potential for a Combined Solution involving Corix, SFU and SFU Trust which would provide thermal energy to both UniverCity residents and the SFU campus utilizing a larger Biomass based solution. There has been no firm resolution on this proposal but Corix and SFU Campus have applied for funding for this solution to various agencies and the applications are currently under review. If this combined CEP were to move ahead, CMUS reports there would be less capital deployed than if two separate solutions were pursued and it would result in higher energy efficiency and cost savings due to operations and fuel supply logistical synergies. When asked in BCUC 1.11.1 why it did not wait and submit a CPCN for the more desirable Combined Solution, CMUS responded that a ruling by the Commission was required to begin construction of the temporary CEP and a final decision on the combined solution would not likely be made prior to the required start date. (Exhibit B-1, pp. 21, 33)

CMUS states that a decision on the final Biomass technology will come from an evaluation of the options available at the time the plant is being developed and notes that the permanent energy centre concept is flexible as it allows other types of supply models (e.g. waste-heat recovery, fuel cells heat pumps etc.) to be easily implemented if they become feasible in the future (Exhibit B-1, pp. 37-38). Further, when questioned as to whether the Biomass plant decision is firm, CMUS states that at this time no decision has been made to even proceed with a Biomass plant solution (Exhibit B-3, BCUC 1.36.2). In support of this, CMUS argues that ratepayers will benefit from not

locking in on a permanent Biomass solution at this time as it leaves the Company the potential to adopt an optimal solution closer to the time of implementation (CMUS Final Submission, p. 7).

Given the statements CMUS has made regarding the development of a permanent CEP it is clear there is a great deal of uncertainty surrounding the future energy source technology, the timing of such a facility, its related costs and impact on ratepayers. As a result, it is difficult to determine with any confidence the permanent solution the Commission is being asked to approve. In this vein, FortisBC Energy questioned CMUS with respect to whether projects that "evolve over time" fit into the existing CPCN Guidelines. CMUS in response acknowledged that such projects may not be well served by the CPCN process as the CPCN Guidelines are designed to review discrete projects which are well defined in terms of costs and timelines (Exhibit B-2, FortisBC 1.1.2).

Commission Determination

The Commission Panel is satisfied that the temporary CEP, the ETS and distribution piping as outlined in the Application have been laid out in sufficient detail to meet CPCN Guidelines. This temporary solution, which will serve the NUS until 2016, relies on proven technology which will be installed over a reasonably tight timeframe thereby reducing the potential for unforeseen costs or technical challenges. In addition, because the three boilers and related equipment proposed will be installed in phases, the risk associated with overbuilding if sales of the housing project fail to live up to expectations is minimized.

However, the Panel is not persuaded that the detail in support of the permanent CEP has been sufficient to satisfy CPCN Guidelines or provide sufficient clarity as to what is being approved. Of greatest concern is the fact that CMUS has yet to make a firm commitment to the technology it will employ or the shape or form of the final solution for the CEP. Within the evidentiary record the Company has outlined several potential solutions in addition to the proposed Biomass solution. One of these involved a new Data Centre at SFU while the other was a joint solution with SFU and SFU Trust for a larger Biomass plant which would serve the needs of both the SFU campus and phases 3 and 4 of the UniverCity development. Neither of these is far enough along to determine

with any degree of certainty that either will proceed. However, neither can be realistically discounted because much might occur in the five year period before a permanent solution is required.

CMUS has provided some detail with regard to a potential Biomass based solution but acknowledges that in addition to there being no certainty that the eventual solution employed will be Biomass, the actual technology for a Biomass solution if employed is also unknown. Given the length of time before construction of a permanent CEP, the Commission Panel understands that prudence would dictate holding back on a decision until such time as the uncertainties are cleared up and the time to completion is such that analysis and recommendations are based on up to date technology and the most recent information. However, this does not mean that that approval should be granted for this CPCN in the absence of a persuasive case and related description which can be relied upon. While the Commission Panel is favourably disposed to the direction that CMUS is moving with this Application, the lack of firm details is very concerning. **Accordingly, the Panel finds that the level of firm detail and conciseness of the project description for the permanent CEP at this time is inadequate and fails to meet the CPCN requirements.**

5.9 Adequacy of Project Cost Estimates

The Commission Panel has concern with respect to the adequacy of project cost estimates. CMUS states that the total capital costs for both the temporary and permanent plant infrastructure to be $12.215 million over the build-out period of 2011 to 2019. As previously stated in Section 4.1 of this Decision, CMUS has confidence that the total capital cost, 9 times out of 10, will be within the estimated cost.

CMUS included a 15 percent contingency for the permanent CEP due to the higher uncertainty with the cost of the biomass technology that would be ultimately selected as well as to account for any unknown temporary and permanent site conditions and site preparation requirements. (Exhibit B-3, BCUC 1.45.2) The overall contingency of 10 percent was used for DPS and ETS. This was assumed at the time of the cost analysis process to be a prudent allowance for any potential

material and construction costs as well as changes in design. (Exhibit B-3, BCUC 1.45.1) Additionally, a capital cost escalation of 2 percent per year is assumed throughout the build-out period. (Exhibit B-1, p. 50)

CMUS applied an optimization/reduction to the capital costs estimates to reflect current construction market conditions as compared to the market conditions in previous years during the "hot" construction market when demand and the prices were significantly higher. (Exhibit B-3, BCUC 1.44.1)

Commission Determination

The Commission Panel accepts CMUS' estimate of a P90 probability confidence level and a Class 3 level of accuracy as adequate in relation to the temporary energy center, given that the timing for construction is within the next 2 years. The use of a 2 percent escalation rate and 10 percent contingency during the build-out period is also acceptable. However, the Panel does not accept that the same level of cost accuracy may be achieved for the permanent CEP since the technology and timing of this portion of the project cannot be finalized at this time.

While the Commission Panel generally accepts CMUS' reasoning that a reduction in capital costs from previous studies may be appropriate in the near future, there is no reassurance that this will continue into the long term. Furthermore, if the permanent CEP is not constructed in the forecast project timeframe, there could be less certainty with forecasted construction costs due to prevailing market conditions at that time and the future costs of the alternative technology that will be selected.

6.0 COMMISSION DECISION AND DETERMINATIONS

6.1 Commission Decision

The Commission Panel has determined that pursuant to Section 46(3) of the *UCA* there is sufficient evidence to support partial acceptance of this CPCN Application. Therefore, the Panel grants a CPCN for the natural gas fuelled temporary CEP and related Thermal Distribution System and Energy Transfer Stations to meet expected demand to 2016 as outlined in the Application. The Commission Panel does not approve construction of the permanent CEP at this time and suspends further consideration of this matter until CMUS is able to adequately meet the requirements outlined in this Decision.

The Commission Panel finds that an evaluation and decision on this CPCN rests on determining whether the proposed project is required for the public convenience and necessity and properly conserves the public interest. As outlined in Section 2.2, a public interest review must consider three different group perspectives. These include the surrounding community, the general public and future Phase 3 and 4 ratepayers. Issues related to the surrounding communities have been dealt with in the discussion of adequacy of consultation (Section 5.2). In addition, the interests of the general public are captured by the Panel's acknowledgement that the project is in alignment with the *Clean Energy Act* and Provincial Government Policy (Section 4.2).

CMUS points out that the Commission is guided by the "green energy objectives" in the 2007 BC Energy Plan and the *Clean Energy Act* and the NUS as an alternative energy district energy system aligns well with these objectives and serves the public interest as identified in both. In summation CMUS states that the "Commission should take into account the important public interest that the NUS serves and exercise its discretion to adapt the regulatory approvals to reflect the special circumstances of this project". (CMUS Final Argument, p. 4)

As noted previously, CMUS states the objective of the Trust is to provide thermal energy cost competitively and enhance the environmental performance of the community. This would align with SFU's commitment to becoming a carbon neutral institution as required by Bill 44 (Exhibit B-1, p. 14). Further, the Company states that SFU Trust has a stewardship role with respect to the lands being developed and has a long term commitment to the well-being of the community. Accordingly, it argues that SFU Trust has a public interest mandate and a desire to both engage and understand local community interest and the general public throughout the project's life. In consideration of this, CMUS further argues that the Commission should give considerable weight to the support of the project from SFU and SFU Trust as well as what it describes as overwhelmingly positive feedback the project has received. (CMUS Final Argument, pp. 4-5)

The Commission Panel does not take issue with many of the submissions of CMUS with respect to consideration of the public interest. The Panel has previously acknowledged in Section 5.3 that the proposed NUS aligns well with both the British Columbia Energy Objectives and the *Clean Energy Act.* While the Panel, given its comments in section 5.2, stops short of describing the public reaction to the project as "overwhelming positive feedback," it is acknowledged that the project is unique and that the SFU Trust has a stewardship role with respect to the development and is committed to the well-being of the community.

The concern of the Panel is the lack of certainty with respect to the permanent CEP. This is further exacerbated by the timing of the development of a permanent CEP which is not scheduled to be completed until 2016. As is outlined in Section 5.4, 5.8 and 5.9 there are significant concerns with cost and availability of Biomass, the lack of an adequate project description made worse by the lack of a firm decision as to what form the permanent CEP will take and what it will cost to both construct and operate. Moreover, as CMUS concedes in its Application " [a]s the demand forecast is subject to a high level of uncertainty, actual operating experience will be required before the energy demand can be accurately forecasted". (Exhibit B-1, p. 28) This statement combined with the information in Section 5.5 raises considerable concern with respect to the credibility of the load forecast. Collectively, these uncertainties with respect to the project serve to further support the view that the financial impact of the NUS on future ratepayers is anything but clear. Given the

CMUS position that cost overruns which are prudently incurred should be recoverable from the ratepayer in response to BCUC IR 2.32.2, the Panel believes that greater certainty with respect to these costs prior to approval of the complete CPCN is in the public interest.

The Commission Panel accepts there is a necessity for a temporary solution to serve the buildings going into service in the fall of 2011. While having some reservations with respect to the potential for stranded assets, we are satisfied that there has been sufficient rigor in preparing the proposal for the temporary CEP. Accordingly, the Panel believes the temporary CEP to be in the public interest and approves construction along with the related distribution DPS and ETS.

The Commission Panel in reaching its decision would like to be clear that it is not rejecting the idea of the proposal for a Biomass based DES to provide thermal energy service to the UniverCity development but are rejecting the lack of certainty and detail related to it. On the contrary, the Panel is supportive of the concept. However, we believe that it is simply too premature to give approval to a largely undefined permanent solution which is not due to start until at least four years from now.

6.2 Further Determinations

In light of the Commission Determination approving only the temporary CEP and related Distribution System and Energy Transfer Stations in this Application, the Panel makes further determinations relating to the financial considerations of Rate Design, Capital Structure, Debt Cost, Return on Equity, and Levelized Rates. CMUS' positions on these issues were outlined in Section 4.0. Finally, we also address the Terms and Conditions of Service. These items are discussed in detail through the following sections.

6.2.1 Rate Design

The Commission Panel agrees with CMUS' rationale for designing a rate structure that better match revenue streams with cost characteristics. Therefore, the **Commission Panel approves the rate design proposed by CMUS, which has a 40 percent variable charge and a 60 percent fixed monthly charge as outlined in the Application, but directs CMUS to recalculate the variable and fixed components of the rate, using the 20-year levelized rate as directed in section 6.2.5.**

The Commission Panel also notes that the temporary CEP has a maximum capacity of 4.4 MW that is less than the 5.7 MW capacity of the permanent CEP. In fact, the temporary CEP is not meant to service the same total square-meter area and respond to the same energy demand as the permanent CEP. **Therefore, for the calculation of the fixed component, the Commission Panel further directs CMUS to use the forecast energy demand and total area in square meters that the 4.4-MW-capacity temporary CEP will be able to service.**

6.2.2 Capital Structure

The Commission Panel approves CMUS' proposal to finance 60 percent of the rate base with deemed debt and the remaining 40 percent of the rate base with common equity. The Commission Panel makes no determination at this time on the short-term component of the total debt structure; however, the Panel notes that utilities operations usually require short-term debt to fund short term obligations and provide an allowance for working capital requirements. In BC, utilities generally have a short-term debt portion in their capital structures (e.g., FortisBC Energy (formerly Terasen Gas) and FortisBC).

6.2.3 Debt Cost

The Commission Panel accepts the proposal that the interest rate will be based on the 10-Year Government of Canada benchmark bond yield of 3.5 percent at the time of this Application and notes that this rate is still reasonable at the time of this Decision.

However, in light of many factors, we do not accept that a further credit spread of 300 basis points is warranted. First, we note that yield curves normally slope upward and thus the credit yield spread for an entity with an AA (low) credit risk (10 year) should be lower than that for an A-rated entity (30 year) because the former has a higher credit rating and shorter maturity than the latter. However, the 200 basis point credit spread for SFU is higher than the 153.9 basis point credit spread for Ontario's A-rated Utility Bond Yield, which is contradictory. Second, we find that some risks, such as those related to technology and fuel costs, are being mitigated since the CPCN is only granted for the temporary CEP and related distribution and energy transfer facilities. This lower risk in turn justifies a lower credit spread. Third, we reiterate that utilities operations usually require short-term debt to fund short term obligations and provide an allowance for working capital requirements, which would reduce borrowing costs below the long-term rate.

The Commission Panel nonetheless recognizes that the NUS will still face some risk related due to the small size of the utility. **Thus, we find that a credit spread of 250 basis points above the 10-year Government of Canada benchmark bond yield of 3.5 percent is reasonable and approve the resultant blended debt rate of 6 percent. Furthermore, we request that CMUS provide the Commission with its recommendations for a robust formula delineating what might be described as the "riskless" rate plus a credit spread reflecting actual risk.** This would likely be in conjunction with a new CPCN application for the permanent CEP.

6.2.4 Return on Equity

The Commission Panel approves a risk premium of 50 basis points over the benchmark ROE. The Commission will revisit this ROE determination in the event the risk profile of the NUS changes in the future.

As outlined in Section 4.4.3, CMUS is requesting a risk premium of 200 basis points above the benchmark utility to develop, construct and operate an alternative energy-based DES for UniverCity on Burnaby Mountain. This level of risk premium was agreed upon with the client, SFU Trust, as a part of the overall negotiation package. While the Commission Panel agrees with CMUS that SFU

Trust and the NUS customers may share some common interest with regard to the long-term sustainability of the community, it also notes the conflicting interest between SFU Trust as the master developer and the NUS customers. Therefore, the Panel concludes that the conflicting nature of their interests is a more significant factor to consider than their shared interests. Accordingly, the Commission Panel rejects CMUS's argument that the agreed ROE should be given considerable weight by the Commission. Furthermore, the Panel finds that no evidence has been provided in this proceeding to justify the requested risk premium of 200 basis points.

With regard to relevant benchmarks, the Commission Panel holds the view - contrary to CMUS submissions outlined in Section 4.4.3 - that a comparison between Dockside Green Energy and the NUS provides a good basis for assessing the additional risk premium requested by CMUS. This is because both are small utilities with a limited geographic and customer base and subject to similar risks in the areas of real estate development, construction costs and company size. Thus the Panel finds that the 100 basis points premium approved by the Commission for DGE offers a good basis for comparison. As explained further below, the Panel further determines that the NUS will be subject to lower business risk than DGE.

Specifically, in light of the Commission Panel's determination to grant a CPCN for the construction of the temporary CEP and related Thermal Distribution System and Energy Transfer Stations, the Panel finds there should be no additional premium related to the biomass technology and fuel cost risks, which CMUS has assessed as "moderate". The Panel also notes that CMUS has proposed various strategies to mitigate some of the business risks inherent in the project. For instance, in contrast to the DGE Biomass plant that was built at the outset, CMUS opted for a phased approach to capital deployment – through a temporary CEP – to mitigate real estate development risks. Although CMUS has assessed such development risks as "moderate to high" for both DGE and the NUS, the Commission Panel believes that the NUS's phased approach decreases the risk level for this project as compared to DGE.

Another risk mitigating strategy relates to the "high level of uncertainty" surrounding the demand forecast. Given the Commission Panel's approval of CMU's proposed fixed/variable rate design that recovers 60 percent of forecast revenues through a fixed monthly charge per sq.mt, in contrast to only 50 percent for DGE, the Panel finds that the NUS's rate design decreases the risk of utility revenue shortfalls as compared to DGE.

Furthermore, the Commission Panel understands that the developer/customer connection risk, which was initially assessed by CMUS as "significant" and given a "high" risk level in contrast to the "low" risk level for DGE, is likely to be significantly reduced in the future. Indeed, the Panel notes the CMUS's report on the Trust's intention to "amend future development agreements between the SFU Trust and third party developers to include the requirements that buildings developed on the lands leased from the SFU Trust and third-party developers to include the requirements that buildings developed on the lands leased from Trust will be required to attach to the NUS." (Exhibit B-4, BCUC 2.30.0)

While the Commission Panel recognizes that CMUS will still face some risk related to the small size of the utility, construction costs and public acceptance, the Panel finds that these risks are altogether less significant than those faced by DGE and, therefore, warrant a lower premium than the 100 basis points over the benchmark ROE the Commission approved for DGE in 2007.

Finally, the Commission Panel notes that while the benchmark utility was once referred to as the "low-risk" utility, this is no longer the case as determined in the Terasen 2009 ROE Decision, which simply refers to Terasen as the benchmark utility.[1] In the 2009 Decision the allowed ROE was increased, in part to reflect the increased business risk Terasen is facing.

For all the reasons stated, the Commission Panel approves a risk premium of 50 basis points over the benchmark ROE.

[1] Terasen Utilities ROE and Capital Structure Decision, December 16, 2009

6.2.5 Levelized Rates

In accordance with Section 60 in the *UCA*, the Commission Panel must ensure that rates being charged to customers are just and reasonable while allowing the utility to earn a fair return. Commission Panel finds that while it is not uncommon to permit "Greenfield" start-up utilities to charge levelized rates, it is imperative that rates being charged to customers fairly represent the type of service being offered, specifically, natural gas service as approved in Section 6.1 above.

The Commission Panel directs CMUS to recalculate a 20-year levelized rate, based solely on the capital costs of the temporary CEP and related distribution system, and adjusted for all the financial directives provided in Sections 6.2.2 to 6.2.4 above. CMUS shall calculate and provide a Rate Schedule which incorporates the revised levelized rate to the Commission within 10 business days of this Decision.

This levelized rate will be charged to all customers initially taking service in the fall of 2011 and may be reviewed from time to time by the Commission.

The Panel recognizes that the under a levelized rate approach, there will be over-earning in the latter years that compensate for the under-earnings in the early years of the project. **Approval for the establishment of a revenue deferral account is granted in order to capture the revenue requirement variances under the levelized rate approach. The Commission Panel further directs CMUS to file a report showing the calculations and balance of the revenue deferral account by December 31 of every year.**

6.2.6 Terms and Conditions of Service

The Commission Panel notes that CMUS has failed to provide the Terms and Conditions of Service in the original Application and even when requested in the first round of information requests. (Exhibit B-3, BCUC 1.50.1) CMUS finally produced the document following the second round of information requests in Exhibit B-4, BCUC 2.43.1. Due to the timing of CMUS' filing of the Terms

and Conditions, the public was not granted an opportunity to clarify or challenge the evidence. The Panel believes in the importance of maintaining a transparent process in assessing all information presented as evidence in all proceedings. As a result, **the Commission Panel is unable to make a determination on the Terms and Conditions of Service at this time. CMUS is directed to submit a schedule of standard fees and charges reflecting the provision of a natural gas service to the Commission within 10 business days of this Decision.** This submission, along with the Terms and Conditions of Service **will be subject to a further review process by the Commission before approval is granted.**

7.0 COMMISSION PANEL COMMENT

The Province of British Columbia issued a news release on April 21, 2011, announcing its intention to provide $4.7 million to support the partnership between SFU, SFU Community Trust and CMUS for a thermal energy system for the SFU campus and UniverCity. This announcement was made following the close of the evidentiary record. Accordingly, it was not considered in this Decision. The Panel expects this announcement may result in many of the uncertainties related to this project to be laid to rest and a firm plan for the future to be developed.

8.0 SUMMARY OF DIRECTIVES

This Summary is provided for the convenience of readers. In the event of any difference between the Directions in this Summary and those in the body of the Decision, the wording in the Decision shall prevail.

	Directive	**Page**
1.	The Commission Panel finds that CMUS has taken steps to ensure that the public was adequately consulted with regard to the Project.	29
2.	The Commission Panel has determined that the public consultation undertaken by CMUS to date has been satisfactory. Further, the Panel directs CMUS to schedule the planned third open house once it has determined more clearly the form and technology to be employed by the NUS.	29
3.	The Commission Panel finds that the Application is generally consistent with British Columbia's energy objectives as outlined in the *CEA.*	31
4.	The Commission Panel finds that there has been inadequate rigor applied to date to investigate and secure sourcing and pricing for suitable fuel for the proposed Biomass permanent CEP.	32
5.	The Commission Panel finds that the energy forecast submitted by CMUS is not sufficiently credible at this stage to base firm decisions as to the size requirements for the permanent CEP or the customer rates which result.	34
6.	The Commission Panel finds that at this point the amount of rigor CMUS has put into analysis of the potential for stranded assets related to the temporary CEP has been inadequate.	37
7.	The Panel finds that the level of firm detail and conciseness of the project description for the permanent CEP at this time is inadequate and fails to meet the CPCN requirements.	40
8.	The Commission Panel accepts CMUS' estimate of a P90 probability confidence level and a Class 3 level of accuracy as adequate in relation to the temporary energy center, given that the timing for construction is within the next 2 years. The use of a 2 percent escalation rate and 10 percent contingency during the build-out period is also acceptable. However, the Panel does not accept that the same level of cost accuracy may be achieved for the permanent CEP since the technology and timing of this portion of the project cannot be finalized at this time.	41

9.	The Commission Panel has determined that pursuant to Section 46(3) of the *UCA* there is sufficient evidence to support partial acceptance of this CPCN Application. Therefore, the Panel grants a CPCN for the natural gas fuelled temporary CEP and related Thermal Distribution System and Energy Transfer Stations to meet expected demand to 2016 as outlined in the Application. The Commission Panel does not approve construction of the permanent CEP at this time and suspends further consideration of this matter until CMUS is able to adequately meet the requirements outlined in this Decision.	42
10.	The Commission Panel approves the rate design proposed by CMUS, which has a 40 percent variable charge and a 60 percent fixed monthly charge as outlined in the Application, but directs CMUS to recalculate the variable and fixed components of the rate, using the 20-year levelized rate as directed in section 6.2.5.	45
11.	For the calculation of the fixed component, the Commission Panel further directs CMUS to use the forecast energy demand and total area in square meters that the 4.4-MW-capacity temporary CEP will be able to service.	45
12.	The Commission Panel approves CMUS' proposal to finance 60 percent of the rate base with deemed debt and the remaining 40 percent of the rate base with common equity.	45
13.	The Commission Panel accepts the proposal that the interest rate will be based on the 10-Year Government of Canada benchmark bond yield of 3.5 percent at the time of this Application and notes that this rate is still reasonable at the time of this Decision.	45
14.	Thus, we find that a credit spread of 250 basis points above the 10-year Government of Canada benchmark bond yield of 3.5 percent is reasonable and approve the resultant blended debt rate of 6 percent. Furthermore, we request that CMUS provide the Commission with its recommendations for a robust formula delineating what might be described as the "riskless" rate plus a credit spread reflecting actual risk.	46
15.	the Commission Panel approves a risk premium of 50 basis points over the benchmark ROE.	46
16.	The Commission Panel directs CMUS to recalculate a 20-year levelized rate, based solely on the capital costs of the temporary CEP and related distribution system, and adjusted for all the financial directives provided in Sections 6.2.2 to 6.2.4 above. CMUS shall calculate and provide a Rate Schedule which incorporates the revised levelized rate to the Commission within 10 business days of this Decision. This levelized rate will be charged to all customers initially taking service in the fall of 2011 and may be reviewed from time to time by the Commission.	47

17.	Approval for the establishment of a revenue deferral account is granted in order to capture the revenue requirement variances under the levelized rate approach. The Commission Panel further directs CMUS to file a report showing the calculations and balance of the revenue deferral account by December 31 of every year.	47
18.	The Commission Panel is unable to make a determination on the Terms and Conditions of Service at this time. CMUS is directed to submit a schedule of standard fees and charges reflecting the provision of a natural gas service to the Commission within 10 business days of this Decision. This submission, along with the Terms and Conditions of Service will be subject to a further review process by the Commission before approval is granted.	50

DATED at the City of Vancouver, in the Province of British Columbia, this 6th day of May 2011.

Original signed by:

D. A. (DENNIS) COTE
COMMISSIONER

Original signed by:

L.A. (LIISA) O'HARA
COMMISSIONER

Original signed by:

DAVE MORTON
COMMISSIONER

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

BRITISH COLUMBIA UTILITIES COMMISSION

ORDER NUMBER C-7-11

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

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

and

An Application by Corix Multi-Utility Services Inc.
for a Certificate of Public Convenience and Necessity
to Construct and Operate a District Energy System for the
UniverCity Neighbourhood Utility Service Project in Burnaby, BC

and

Approval of the proposed Revenue Requirement, Rate Design, Levelized Rates, and Service Agreement

BEFORE: D.A. Cote, Panel Chair/Commissioner
L.A. O'Hara, Commissioner
D. Morton, Commissioner

May 6, 2011

O R D E R

WHEREAS:

A. On November 26, 2010, Corix Multi-Utility Services Inc. (CMUS) applied to the British Columbia Utilities Commission (Commission) for a Certificate of Public Convenience and Necessity (CPCN) under sections 45 and 46 of the *Utilities Commission Act* (Act) for the construction and operation of a district energy system (DES) for the UniverCity Neighbourhood Utility Service (NUS) in Burnaby, BC, and for approval under sections 59, 60 and 61 of the Act for the proposed revenue requirement, rate design, Service Agreements, and levelized rates (the Application);

B. The UniverCity is a sustainable residential community, being developed by Simon Fraser University (SFU) Community Trust, being built adjacent to the main SFU campus. The development is being constructed in 4 phases. Phase 1 and 2 have already been constructed and will not be connected to the proposed DES. The first three buildings of Phase 3 are under development and scheduled for completion in the fall of 2011, which will be served by the proposed NUS. When completed in 2019 the development will total 296,572 square meters;

C. CMUS will be responsible for development and ownership of the NUS, a community-based utility. The primary responsibility will be to develop, implement, operate and maintain the DES, which will provide thermal energy to residents of Phase 3 and 4 of the UniverCity developments;

D. CMUS proposes that the DES will be initially served by a temporary Central Energy Plant (CEP) using natural gas boilers and a distribution system which is expected to serve the needs of the NUS until 2016. A transition to a permanent CEP using an alternative energy fuel source (such as biomass) will replace the temporary Central Energy Plant as the primary source of thermal energy when sufficient load requirements are reached;

. . . /2

E. By Order G-193-10, dated December 10, 2010, the Commission established a written public hearing process and regulatory timetable to review this Application;

F. The Commission has reviewed the Application and has determined that it is in the public interest to grant a partial approval of this CPCN Application.

NOW THEREFORE the Commission orders as follows:

1. Approval for Corix Multi-Utility Services to construct and operate a natural gas fuelled temporary Central Energy Plant and related Thermal Distribution System and Energy Transfer Stations as outlined in the Application.

2. Further consideration of the permanent Central Energy Plant is suspended until CMUS is able to meet the requirements outlined in the Decision.

3. The approved temporary Central Energy Plant will operate on the basis of the following terms:

   a. A ROE which is 50 basis points over the benchmark ROE;

   b. A rate base with 60 percent deemed debt and the remaining 40 percent with common equity;

   c. A rate design with a 60 percent fixed monthly charge and a 40 percent variable charge which are to be recalculated using a 20-year levelized rate, based solely on the capital cost of the temporary Central Energy Plant plus the related distribution system. This is to be adjusted for all financial directives provided in Sections 6.2.2 to 6.2.4 of the Decision.

   d. A blended debt rate of 6.0 percent based on the 10-year Government of Canada benchmark bond yield of 3.5 percent and a credit spread of 250 basis points.

   e. The establishment of a revenue deferral account to capture the revenue requirement variances under the levelized rate approach.

4. Corix Multi-Utility Services must file a report showing the calculation and balance of the revenue deferral account by December 31 of each year.

5. Corix Multi-Utility Services must submit a schedule of standard fees and charges reflecting the provision of natural gas service to the Commission within 10 business days of this Decision.

DATED at the City of Vancouver, in the Province of British Columbia, this 6th day of May 2011.

BY ORDER

Original signed by:

D.A. Cote
Panel Chair/Commissioner

REGULATORY TIMETABLE

ACTION	DATE (2011)
Commission Information Request No. 1	Thursday, January 6
Intervener Information Request No.1	Thursday, January 13
Intervener/Interested Party Registration	Thursday, January 13
Response to Commission and Intervener Information Request No. 1	Thursday, January 27
Commission and Intervener Information Requests No. 2	Thursday, February 10
Response to Commission and Intervener Information Requests No. 2	Thursday, February 24
CMUS Final Submission	Thursday, March 10
Intervener Final Submission	Thursday, March 17
CMUS Reply Submission	Thursday, March 24

This timetable was amended by Order Amended G-18-11 dated March 3, 2011 as follows:

ACTION	DATE (2011)
CMUS Final Submission	Friday, March 4, 2011
Intervener Final Submission	Monday, March 7, 2011
CMUS Reply Submission	Wednesday, March 9, 2011

CLEAN ENERGY ACT

British Columbia's energy objectives

2 The following comprise British Columbia's energy objectives:

(a) to achieve electricity self-sufficiency;

(b) to take demand-side measures and to conserve energy, including the objective of the authority reducing its expected increase in demand for electricity by the year 2020 by at least 66%;

(c) to generate at least 93% of the electricity in British Columbia from clean or renewable resources and to build the infrastructure necessary to transmit that electricity;

(d) to use and foster the development in British Columbia of innovative technologies that support energy conservation and efficiency and the use of clean or renewable resources;

(e) to ensure the authority's ratepayers receive the benefits of the heritage assets and to ensure the benefits of the heritage contract under the *BC Hydro Public Power Legacy and Heritage Contract Act* continue to accrue to the authority's ratepayers;

(f) to ensure the authority's rates remain among the most competitive of rates charged by public utilities in North America;

(g) to reduce BC greenhouse gas emissions

(i) by 2012 and for each subsequent calendar year to at least 6% less than the level of those emissions in 2007,

(ii) by 2016 and for each subsequent calendar year to at least 18% less than the level of those emissions in 2007,

(iii) by 2020 and for each subsequent calendar year to at least 33% less than the level of those emissions in 2007,

(iv) by 2050 and for each subsequent calendar year to at least 80% less than the level of those emissions in 2007, and

(v) by such other amounts as determined under the *Greenhouse Gas Reduction Targets Act*;

(h) to encourage the switching from one kind of energy source or use to another that decreases greenhouse gas emissions in British Columbia;

(i) to encourage communities to reduce greenhouse gas emissions and use energy efficiently;

(j) to reduce waste by encouraging the use of waste heat, biogas and biomass;

(k) to encourage economic development and the creation and retention of jobs;

(l) to foster the development of first nation and rural communities through the use and development of clean or renewable resources;

(m) to maximize the value, including the incremental value of the resources being clean or renewable resources, of British Columbia's generation and transmission assets for the benefit of British Columbia;

(n) to be a net exporter of electricity from clean or renewable resources with the intention of benefiting all British Columbians and reducing greenhouse gas emissions in regions in which British Columbia trades electricity while protecting the interests of persons who receive or may receive service in British Columbia;

(o) to achieve British Columbia's energy objectives without the use of nuclear power;

(p) to ensure the commission, under the *Utilities Commission Act*, continues to regulate the authority with respect to domestic rates but not with respect to expenditures for export, except as provided by this Act.

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

and

Corix Multi Utility Services Inc.
Certificate of Public Convenience and Necessity
for the Neighbourhood Utility Service at UniverCity, Burnaby

EXHIBIT LIST

Exhibit No.	Description
COMMISSION DOCUMENTS	
A-1	Letter dated December 6, 2010 - Appointment of Panel
A-2	Letter and Order G-193-10 dated December 10, 2010 - Establishing a Written Hearing Process and Regulatory Timetable
A-3	Letter dated January 6, 2011 – Information Request No. 1 to Corix
A-4	Letter dated February 10, 2011 – Order G-18-11 and Amended Regulatory Timetable
A-5	Letter dated February 17, 2011 – Commission Information Request No. 2
A-6	Letter dated March 3, 2011 – Amended Regulatory Timetable
A2-1	Letter dated February 17, 2011 – Commission Staff filing Ontario Energy Board - Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors
A2-2	Letter dated February 17, 2011 – Commission Staff filing Ontario Energy Board - Cost of Capital Parameter Updates for 2011 Cost of Service Applications for Rates
A2-3	Letter dated February 17, 2011 – Commission Staff filing UniverCity on Burnaby Mountain – UniverCity East Neighbourhood Plan Development Guidelines and Requirements
A2-4	Letter dated February 17, 2011 – Commission Staff filing City of Burnaby – Bylaw No. 12760 a BYLAW to amend Bylaw No. 4742, being Burnaby Zoning Bylaw 1965

Exhibit No.	Description
APPLICANT DOCUMENTS CORIX	
B-1	**CORIX MULTI-UTILITY SERVICES INC. (CORIX) -** Letter dated November 26, 2010 – Application for a Certificate of Public Convenience and Necessity for the Neighbourhood Utility Service at UniverCity, Burnaby
B-1-1	**CONFIDENTIAL** – Application Appendices A, D, G
B-1-2	Letter Dated December 10, 2010 – Errata No. 1 to page 11 of the application
B-2	Letter Dated January 28, 2011 – Corix Response to Terasen IR No. 1
B-3	Letter Dated January 28, 2011 – Corix Response to BCUC IR No. 1
B-3-1	Letter Dated February 8, 2011 – Corix Additional Responses to BCUC IR 1
B-3-2	Letter Dated February 10, 2011 – Corix Additional Evidence
B-4	Letter Dated February 25, 2011 – Corix Submitting Responses to BCUC IR No. 2
B-5	Letter Dated March 1, 2011 – Corix Request for filing extension
INTERVENOR DOCUMENTS	
C1-1	**TERASEN GAS INC., TERASEN GAS (VANCOUVER ISLAND) AND TERASEN GAS (WHISTLER) COLLECTIVELY TERASEN UTILITIES (TUS)** Letter Dated January 5, 2011 - Request for Intervener Status by Dianne Roy
C1-2	Letter Dated January 13 2011 – TUS Information Request No. 1