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Shannon Wall Centre Rental Apartments Limited Partnership

Shannon Estates Thermal Energy System Rate Application

Decision
and Order G-190-17

December 19, 2017

Before:

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

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Executive summary

On May 24, 2016, Shannon Wall Centre Rental Apartments Limited Partnership (SWCRA) filed an application with the British Columbia Utilities Commission (Commission) for rates approval under sections 59-61 and 89-90 of the *Utilities Commission Act* for the Shannon Estates Thermal Energy System (SETES) located at 7199 Granville Street, Vancouver, BC (Application). SWCRA seeks approvals related to rates and rate structure, deferral accounts and rate riders, and the SETES Tariff, which includes Terms and Conditions, Standard Fees and Charges and the Rate Schedule.

The SWCRA development consists of ten buildings, including restored heritage buildings, new townhomes and suites, a rental apartment building (Shannon Mews & Apartments), gardens, parks and grounds, and related infrastructure. The development is partially complete at this time, with the final phase expected to be completed in 2018/early 2019.

SWCRA's proposed rates consist of a monthly capacity levy, a monthly metering charge, and consumption dependent space heating, domestic water heating and space cooling charges. As opposed to setting rates based on the costs of the SETES, SWCRA proposed to peg the monthly capacity levy to the Class 1 Southeast False Creek (SEFC) Neighbourhood Energy Utility (NEU) Residential or Mixed Use Residential Building Rate, and to peg the consumption dependent charges to the arithmetic mean of Step 1 and Step 2 of British Columbia Hydro and Power Authority's (BC Hydro) rate schedule 1101 (note that the proposal for the cooling charge was to divide the arithmetic mean of BC Hydro's rate by two).

The Panel raised a number of concerns regarding SWCRA's proposed approach to setting its rate structure and rates. The Panel pointed to the fact that over the life of the SETES, SWCRA's earnings and return on equity may likely be higher than what is generally considered acceptable for regulated Stream B TES utilities. The Panel also stated that due to the nature of SWCRA's proposal (i.e. pegging rates to other utilities) the "traditional" method for assessing just and reasonable rates is not applicable, yet SWCRA has not provided sufficient evidence or explanation for the Panel to assess just and reasonable rates in an alternative manner.

The Panel also compared SWCRA's proposed rates to other utilities' rates, such as SEFC and BC Hydro and found that, if approved as requested, the Shannon Estates ratepayers would face thermal energy rates significantly higher than either SEFC or BC Hydro.

The Panel therefore denied SWCRA's proposed rates and rate structure and found that the most appropriate method for setting rates for the SETES is a levelized rate approach. The Panel directed SWCRA to file an application to set rates under a levelized rate structure by no later than June 30, 2019 so that levelized rates may be implemented effective January 1, 2020.

Until such time as SWCRA files a new levelized rate application, the Panel found that pegging the SETES rates to a single utility is the most appropriate approach. Of the utilities examined in evidence, the Panel found the SEFC NEU to be the most reasonable proxy. As SWCRA explained, it selected the SEFC's monthly levy because "like SETES, SEFC must similarly maintain the thermal capacity of a plant that consists of electric heat pumps and gas fired boilers and the associated distribution system." BC Hydro, on the other hand, is a vastly different utility to the SETES. By pegging the SETES rates to one utility – SEFC NEU – SWCRA's goal of regulatory efficiency is maintained as well as customer understandability. Pegging rates to only one utility will also be administratively simpler because SWCRA will only have to implement one rate change each year and these rate changes will occur at the same time each year.

The Panel recognized that under the revised rates approved in this Decision SWCRA may not be able to recover its costs and that there is currently no deferral account in place to address this under-recovery. The Panel therefore approved for SWCRA to establish a deferral account to record any annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at approved rates and the annual cost of service. SWCRA must report on the balance in this deferral account as part of the future levelized rate application and request approval to recover any balance in this deferral account at that time. The deferral account was approved to accrue carrying charges based on SWCRA's weighted average cost of capital.

The monthly metering charge of \$9.50 per account was approved as applied for.

The Panel approved the following three deferral accounts: Sustainment Capital Deferral Account (SCDA), Emergency Repair Deferral Account (ERDA), and the Regulatory Deferral Account (RDA). However, the Panel did not approve any of the requested rate riders for these deferral accounts at this time. The Panel found SWCRA's proposals for the SCDA and ERDA to lack clarity and therefore directed SWCRA, in the event that an amount is recorded in the SCDA or ERDA, to apply to the Commission for approval of the rate rider at that time, with specific reporting requirements. With regard to the RDA, the Panel found that it was more appropriate to delay recovery of the RDA until 2020, which is the time that the development is expected to be fully built out, so that ratepayers in both phases of the development will share equally in the regulatory proceeding costs. The Panel therefore directed SWCRA to file for recovery of the RDA as part of the levelized rate application which was previously directed to be filed with the Commission by June 30, 2019.

Overall, the Panel found the Revised SETES Tariff, which was provided as Appendix A2 to Exhibit B-20, to be just and reasonable. The Panel directed that certain items in the Revised SETES Tariff be removed or amended and approved the Revised SETES Tariff subject to the aforementioned changes.

The Panel directed SWCRA to submit a compliance filing to the Commission by January 31, 2018. This filing must include, among other things, the calculation of the difference between the interim rates approved by Order G-77-16A and the permanent rates approved in this Decision. SWCRA must include a proposal for refunding the difference between interim and permanent rates to ratepayers.

1.0 Introduction

1.1 Background

On May 24, 2016, Shannon Wall Centre Rental Apartments Limited Partnership (SWCRA) filed an application with the British Columbia Utilities Commission (Commission) for rates approval under sections 59-61 and 89-90 of the *Utilities Commission Act* (UCA) for the Shannon Estates Thermal Energy System (SETES) located at 7199 Granville Street, Vancouver, BC (Application). The development consists of ten buildings, including restored heritage buildings, new townhomes and suites, a rental apartment building (Shannon Mews & Apartments), gardens, parks and grounds, and related infrastructure. The development is partially complete at this time, with the final phase expected to be completed in 2018/early 2019.¹

The City of Vancouver required connection to a low carbon thermal energy system as a condition for the development. Accordingly, the development includes a small thermal district energy utility to serve the thermal energy requirements of 387 strata units, 213 rental apartments, the common areas of each of the buildings and two commercial tenants for space heating, space cooling, and domestic hot water (DHW).² Each customer is individually metered for the thermal energy services provided to them.³ The service area encompasses two phases of building development (Phase 1 and Phase 2). All customers of Phase 1, with the exception of the Block C dwelling units, receive service for space heating, space cooling, and domestic hot water heating. Block C dwelling units receive only space heating and domestic hot water heating. All customers of Phase 2 receive service for space heating, space cooling, and domestic hot water heating.⁴

On February 5, 2016, SWCRA filed an application pursuant to the Commission's TES Regulatory Framework Guidelines (TES Guidelines)⁵ for a Stream B TES requesting approval under section 45 of the UCA for a Certificate of Public Convenience and Necessity (CPCN). In the application, SWCRA provided a capital cost estimate of \$4,952,000;⁶ however, this estimate was increased to \$7,508,234.⁷

On April 21, 2016, by Order C-4-16, the Commission granted a CPCN to SWCRA to own and operate the SETES with an estimated capital cost of \$7.5 million.

1.2 Review of the Application and regulatory process

On June 1, 2016, by Order G-77-16A, the Commission approved interim and refundable rates for the SETES, effective June 1, 2016, and established a regulatory timetable which included intervener registration, Commission and intervener information request (IR) No. 1, and written final and reply arguments.

In accordance with Order G-77-16A, FortisBC Alternative Energy Services Inc. (FAES) and Mr. Robert Peden registered as interveners in the proceeding.

On July 20, 2016, due to new evidence being filed in SWCRA's reply argument, including a confidential financial model, the Commission issued Order G-118-16 amending the regulatory timetable and re-opening the evidentiary record to allow for a second round of Commission and intervener IRs and for additional written final and reply arguments.

¹ SWCRA Final Argument dated June 12, 2017, p. 3.

² Ibid., pp. 3, 7.

³ Ibid, p. 7.

⁴ Exhibit B-1-1, p. 14.

⁵ Appendix A to Order G-127-14; Appendix A to Order G-27-15.

⁶ Exhibit B-1-1, Appendix B1, p. 21.

⁷ Ibid., Appendix B2, BCUC IR 4.1.1.

On October 11, 2016, the Commission received a letter from Mr. Dean Thomas Fox, an owner of a unit in Phase II of the SETES, stating, among other things, that adequate notice of the Application had not been provided to all affected parties. The Commission sought submissions from SWCRA and interveners on Mr. Fox's letter. Based on the submissions received from SWCRA and Mr. Fox, the Commission issued Order G-161-16A on November 7, 2016, re-opening the evidentiary record and providing a new opportunity for intervener registration.

The following new parties registered as interveners in the proceeding:

- Shannon Ratepayers Group (SRG), represented by Mr. Fox;
- Mr. Michael Lui;
- Mr. Gerard Duffy; and
- Mr. Martin Parker.

Of these new registered interveners, SRG and Mr. Duffy actively participated in the proceeding.

Based on the submissions received from SWCRA and interveners on further process, the Commission issued Order G-193-16 on December 19, 2016, establishing a further regulatory timetable which included SWCRA's filing of an updated application on February 6, 2017, and a third round of Commission and intervener IRs, with further process to be determined.

On February 6, 2017, SWCRA filed an updated application (Updated Application).

Pursuant to Order G-52-17 dated April 6, 2017, the Commission established the remainder of the regulatory timetable which included the filing of intervener evidence, IRs on intervener evidence, a deadline for SWCRA to file notice of its intent to submit rebuttal evidence, and alternate deadlines for filing written final and reply arguments depending on whether or not SWCRA were to file rebuttal evidence.

Additionally, the Panel issued a series of IRs to SWCRA on April 24, 2017. SWCRA responded to the Panel IRs on May 8, 2017.

On April 25, 2017, Mr. Duffy submitted evidence and on April 26, 2017, SRG submitted evidence from Ms. Gail Tabone of EES Consulting (EES).

On June 1, 2017, SWCRA filed a letter with the Commission stating that it does not intend to file rebuttal evidence.

SWCRA filed its final argument on June 13, 2017. SRG and Mr. Peden filed their final arguments on June 26, 2017, and Mr. Duffy filed his final argument on June 27, 2017. SWCRA filed its reply argument on July 12, 2017.

Prior to filing its reply argument, on July 11, 2017, SWCRA filed supplementary responses to unanswered Commission IRs (IR No. 3). While the supplementary IR responses were filed after the close of the evidentiary record, the Commission, by letter dated August 9, 2017, accepted the responses and re-opened the evidentiary record. The Commission also provided SWCRA and interveners the opportunity to file additional arguments limited to the information contained in the supplementary IR No. 3 responses; however, no parties filed additional arguments.

In addition to the registered interveners in the proceeding, 26 individuals registered as interested parties, many of whom submitted comments, and ten individuals filed letters of comment.

1.3 Approvals sought

1.3.1 Interim approvals sought

Pursuant to sections 89-90 of the UCA, SWCRA sought interim relief to invoice customers effective June 1, 2016, based on rates applied for in the initial Application on an interim and refundable basis pending final determination of the Application. The initial SETES Tariff, with Terms and Conditions and Rate Schedule, was included as Appendix A to the Application.

On May 26, 2016, the Commission, by Order G-77-16A, granted SWCRA's request for interim rates effective June 1, 2016. The Commission directed, among other things, that any differences between the interim and permanent rates that are determined by the Commission following final disposition of the Application are subject to refund/recovery, with interest, at the average prime rate of SWCRA's principal bank for its most recent year in the manner as set out by a Commission order that establishes permanent rates.

SWCRA filed the Updated Application in February 2017. The key changes to the Updated Application were the Capital Reserve Fund (CRF) and Emergency Repair Fund (ERF) were amended to become deferral accounts and the Sustainment Capital Fund Rate Rider was amended to collect funds after the expense has occurred and not in advance. The Updated Application also contained a new request for a Regulatory Deferral Account (RDA) and rate rider to recover costs related to the current regulatory process. Also, subsequent to its interim rate approval, SWCRA revised its initial SETES Tariff twice: the first time when it filed its Updated Application, and the second time as part of its response to Commission IR No. 3 (Revised SETES Tariff).⁸

The following section describes the final relief sought by SWCRA in its Updated Application and Revised SETES Tariff. Any differences between the interim and final reliefs sought are described below.

1.3.2 Final approvals sought

SWCRA seeks Commission approval of the following:⁹

- 1) Approval of basic and consumption dependent charge components of the thermal energy rates, included in subsections C1 to C4 of the revised tariff filed as Appendix A2 to B-20 (Revised SETES Tariff):
 - a. Monthly Capacity Levy equal to the Class 1 South East False Creek (SEFC) Residential or Mixed Use Residential Building Rate, converted to dollars per square foot, as amended or replaced from time to time. The Monthly Capacity Levy rate is currently \$0.0489 per square foot (sqft);
 - b. Monthly metering charge of \$9.50 per account;
 - c. Consumption Dependent Space Cooling rate equal to the arithmetic mean divided by two of Step 1 and Step 2 of British Columbia Hydro and Power Authority (BC Hydro)'s rate schedule (RS) 1101, as amended or replaced from time to time. The Space Cooling rate is currently \$0.0518 per kilowatt-hour (kWh);
 - d. Consumption Dependent Space Heating rate equal to the arithmetic mean of Step 1 and Step 2 of BC Hydro's RS 1101, as amended or replaced from time to time. The Space Heating rate is currently \$0.1036/kWh; and
 - e. Consumption Dependent DHW rate equal to the arithmetic mean of Step 1 and Step 2 of BC Hydro's RS 1101, as amended or replaced from time to time. The DHW rate is currently \$0.1036/kWh.

⁸ Exhibit B-20, Appendix A2.

⁹ SWCRA Final Argument, pp. 9-10.

SWCRA has not amended the relief sought in respect of these rate components in its Updated Application. While SWCRA has amended the wording of subsections C1 to C4 in the Revised SETES Tariff to clarify that these charges are “amended or replaced from time to time,” SWCRA’s intent to peg the SETES rate components to other utilities’ rates remains unchanged.¹⁰

- 2) Approval of the standard fees and charges, included in Section D – Standard Fees and Charges Schedule of the Revised SETES Tariff:
 - a) Service start charge of \$50.00;
 - b) Service restart charge of \$125.00 during normal service hours;
 - c) Service restart charge of \$312.00 during non-business hours;
 - d) Bill Non-Payment Collection charge of \$45.00;
 - e) Dishonoured Payment Charge of \$25.00;
 - f) Late Payment Charge lesser of 1.0 percent per month or maximum allowed interest rate; and
 - g) Disputed Meter Testing Fees are charged on market rates to inspect the meter, none if meter is out of tolerance.

The above list reflects the Revised Schedule of Standard Fees and Charges; however, the Commission granted interim approval to the initial Schedule of Standard Fees and Charges, which included the following:

- Service Stop or Termination Charge of \$125.00; and
- Interest on cash security deposit: the utility will pay interest on any cash security deposit at the Utility’s prime interest rate. Payment of interest will be credited to the Customer’s account in January of each year.¹¹

SWCRA removed the provision to pay interest on cash security deposits because it also removed the provision to charge security deposits to customers from the Revised Terms and Conditions.¹²

- 3) Approval of regulatory accounts and rate riders, included in subsection C5 of the Revised SETES Tariff:
 - a) Sustainment Capital Deferral Account and rate rider: to be activated should capital replacement costs exceed budgeted replacement figures for the year by 30 percent as shown under the “Capital Replacement Cost” line in the SETES rates financial model under line item “Contingency Deposit;”
 - b) Emergency Repair Deferral Account and rate rider: to be activated in accordance to SWCRA’s response to BCUC IR 77.2 (Exhibit B-20); and
 - c) Regulatory Deferral Account and rate rider.
- 4) Approval of the SWCRA Thermal Energy Service Tariff as provided in Appendix A2 to Exhibit B-20.

1.4 Legislative and policy considerations

A number of framework and policy considerations have shaped the design of the SETES and its rates and the Panel considers them to be key factors when assessing the appropriateness of SWCRA’s rate proposals. These include: (i) the Commission’s TES Guidelines, which outline the requirements for Stream B TES rate applications;

¹⁰ Exhibit B-1-1, pp. 10-13.

¹¹ Exhibit B-1, Thermal Energy Service Tariff Schedules, pp. 43-44.

¹² Exhibit B-20, Appendix A2.

(ii) the requirements for a TES imposed by the City of Vancouver (CoV); (iii) the CoV Administrative Reports pertaining to the SEFC Neighbourhood Energy Utility (NEU) rates; and (iv) the CoV's Zero Emissions Building Plan adopted by the CoV in July 2016. These are discussed below.

1.4.1 TES Guidelines for Stream B utilities

As stated above, the Commission determined that SETES is a Stream B utility under the Commission's TES Guidelines. The applicable TES Guidelines for a Stream B TES rates application are sections 2.4.3 and 2.4.4:

2.4.3 Stream B TES Rates

Approval of Stream B TES rates is governed by sections 59-61 of the UCA. Before setting rates, Applicants should ensure that they review these sections.

Applicants are also required to consider the Commission's rate setting principles, outlined below.

1. provide an equitable balance of risk and cost (such as forecast load and cost risk) between the utility and the ratepayer or generation of ratepayers;
2. use the least deferral mechanisms possible;
3. restrict the ability of the utility to pass controllable costs onto ratepayers;
4. use the least amount of regulatory oversight to protect the ratepayer (minimize the regulatory burden and costs on the utility, ratepayers and the Commission); and
5. avoid rate shock (>10 percent change in rates per annum is generally considered "Rate Shock").

2.4.4 Stream B TES Rates Application

A Stream B rate Application and calculations must include:

- i. Description and details of the proposed rates (at minimum) for the initial five years for all rate classes. Include information on:
 - a. the rate design (i.e. fixed/variable component, single/multiple rate classes, etc.);
 - b. how rate increases will be determined; and
 - c. why the rate(s) and rate design is fair and reasonable.
- ii. Options and terms for customers who enter into long-term contracts to opt out/cancelling the energy supply services.
- iii. Information confirming the proposed rates will be competitive with other service options that are available to customers in the new service area (if appropriate).
- iv. If the rate proposed is based on a regulated Cost of Service rate-setting mechanism, this will be considered as a method of last resort. Therefore, the following must be provided:
 - a. analysis of alternative rate setting mechanisms for the Project;
 - b. justification as to why these alternatives are not preferable, making reference to:
 1. the natural monopoly characteristics of the system;
 2. the competitive market potential for the project;
 3. the utility's obligation to serve new customers; and

4. rate setting mechanisms that encourage public utilities to increase efficiency, reduce costs and enhance performance.

A Stream B Rates Application must also include a proposed Tariff containing fees and terms and conditions of service. Include two copies of the tariff for endorsement by the Commission. The Commission must approve and endorse one copy of the tariff for the Applicant before it is deemed effective.

1.4.2 City of Vancouver policy considerations

Given that the CoV required the developer to implement a low-carbon TES in the Shannon Estates development, as explained in the quote from SWCRA's CPCN application below, this section looks at the CoV's policy considerations in respect of Neighbourhood Energy Systems (NES) rates.

It is noted that the City of Vancouver is requiring the TES as a precondition for the development of the buildings within the proposed service area. [...] The City of Vancouver is not permitting other sources of thermal energy to be included in the development. [...] Various alternatives are regularly available for space heating, space cooling, and domestic hot water to most residential occupancies however, the municipality in which Shannon Estates is located has policies which intentionally limit customer choice to a TES. [...] Other alternatives that would typically be considered were not further explored due to the restrictions from the City of Vancouver to create a TES plant.¹³

In the Updated Application, SWCRA cites the following requirements and considerations required by the CoV:

- CoV's Greenest City plan intends for neighbourhood energy systems (such as Shannon Estates TES) to replace natural gas energy with renewable energy.
- CoV obligates SWCRA to design the TES as a low-carbon system to achieve 70 percent of annual heating requirements from low-carbon source(s).
- CoV policy obligates all space heating and domestic hot water heating in the service area of Shannon Estates TES to be provided by the TES.
- The standard of practice for low-carbon source(s) in Vancouver is electricity.¹⁴

The CoV's NES Strategy states:

Developing neighbourhood renewable energy systems throughout Vancouver is a key strategy to meeting the Greenest City 2020 Action Plan and Renewable City Strategy goals to:

- Cut carbon emissions
- Reduce our dependence on fossil fuels
- Keep energy affordable in the long term
- Achieve 100% of our energy needs from renewable sources before 2050.

Neighbourhood renewable energy systems supply centralized heating, hot water, and sometimes cooling for multiple buildings. These systems use low-carbon renewable energy sources, such as sewage waste heat, to reduce the use of fossil fuels. They also eliminate the need for boilers in individual buildings, and provide environmentally-friendly, affordable heat and hot water."¹⁵

¹³ Exhibit B-1-1, Appendix B1, pp. 11-12.

¹⁴ Ibid., p. 11.

¹⁵ Exhibit B-3, FAES IR 8.0.

The CoV's Neighbourhood Energy Centre Guidelines state: "GHG reduction with reasonable energy rates should be the goal. The City's experience has also shown that this is possible while achieving the above Guideline regarding Climate Protection."¹⁶

1.4.3 SEFC neighbourhood energy utility rates

In light of SWCRA's proposal to peg the SETES's capacity levy to that of the SEFC NEU, this section presents the CoV's objectives and rate-setting principles with respect to SEFC NEU customer rates. While an abundance of documents are available from the CoV's website, this overview is limited to the CoV Administrative Reports on SEFC NEU Customer Rates (2015 Report,¹⁷ 2016 Report,¹⁸ 2017 Report¹⁹) and to the 2015 SEFC NEU Five-Year Review,²⁰ as provided by SWCRA during the proceeding.

The 2015 SEFC NEU Five-Year Review, dated June 26, 2015, notes that one of the Key Performance Indicators (KPI) and targets is:

KPI #4: Competitive rates – Council policy requires that the NEU "*strives to establish and maintain customer rates that are competitive with the long-term capital and operating costs of other heating options available to customers.*" When the NEU started operation in 2010, a target was set to limit its rates to no greater than a 10% premium above the BC Hydro rate. Staff recommend no change to the target. The current NEU rate is 8% lower than the BC Hydro effective electricity rate.²¹

Additionally, each of the 2015, 2016 and 2017 Reports states:

- This report seeks Council approval of the recommended [year] SEFC NEU customer rates, which incorporates a 3.2% net increase over [previous year]. This increase enables the NEU to recover its long-term costs under the commercial utility rate model, while providing stable and competitive energy rates for customers.²²
- The fundamental goal of the SEFC NEU is to minimize GHG emissions via a financially self-sustaining, commercially operated utility that delivers competitively priced energy services.²³
- [...] to ensure that the rate increases recommended in this report reflect an appropriate balance between the need to recover the City's costs for operating the NEU and the customer's need to receive fair and competitive rates for energy services delivered.²⁴

In particular, each of these reports includes a section entitled "Comparison of NEU Rates to Other Energy Providers." In the 2017 Report states:

[...] To assess the competitiveness of the NEU, staff examined what a typical NEU customer would pay compared with other energy providers. Table 4 includes comparisons with BC Hydro, FortisBC natural gas, and a range of district energy providers.

Because the rate structures and type of service of these energy providers vary, an "effective rate" is calculated for the purposes of comparison. This rate illustrates what customers will pay per megawatt-hour for heating. Based on the recommended rate increase of 3.2%, the proposed 2017 effective rate for the NEU is \$106 per MW.h. This effective rate assumes an

¹⁶ Ibid.

¹⁷ Exhibit B-1-1, Appendix D2.

¹⁸ SWCRA Reply Argument dated July 15, 2016.

¹⁹ Exhibit B-17, SRG IR 2.7, Appendix A.

²⁰ SWCRA Reply Argument dated July 15, 2016.

²¹ Ibid.

²² 2015 Report, p. 1; 2016 Report, p. 1; 2017 Report, p. 1.

²³ Ibid., page 2 on each report.

²⁴ 2015 Report, p. 5; 2016 Report, p. 5; 2017 Report, p. 5.

average residential customer would consume 109 kilowatt hours per square metre of floor area annually, regardless of what energy provider they use.

The 2017 NEU effective rate continues to be well within the target maximum 10% premium over electricity. The proposed 2017 NEU rate is 6% lower than the forecast 2017 BC Hydro effective rate.²⁵ [Emphasis added]

Table 4 below is reproduced from the 2017 Report:²⁶

TABLE 4. COMPARISON OF EFFECTIVE RATES, SEFC NEU WITH OTHER PROVIDERS

Energy Provider	GHG Emission Intensity (kg CO ₂ /MW.h)	Estimated Effective Rate ¹ (\$/MW.h)	Year of Effective Rate	Notes
SEFC NEU (Hot Water)	66	\$103	Proposed 2016	The NEU bills strata corporations, not individual suites; any incremental strata sub-metering costs incurred by NEU consumers are not included here.
BC Hydro (Electricity)	24 ²	\$109 ² \$113 ²	2015 Proposed 2016	BC Hydro effective rate calculation is based on 50% of consumption at BC Hydro's Residential Step 1 Rate and 50% at Step 2, and includes a rate rider.

Furthermore, the CoV Council approved eight rate-setting principles for the SEFC NEU on December 14, 2016. They are provided in each of the 2015, 2016 and 2017 Reports and are copied below for ease of reference:²⁷

1. That NEU rates are structured so as to recover the following costs incurred by the City, based on forecasted costs:
 - i. all direct operating costs associated with the NEU,
 - ii. all debt service and repayment costs associated with the NEU,
 - iii. the share of City administrative overheads that are attributable to the NEU,
 - iv. property taxes and/or payments-in-lieu of property taxes, as appropriate,
 - v. a reserve fund for NEU rate stabilization,
 - vi. an appropriate level of compensation for the risks and liabilities assumed by the City associated with the ownership and operation of the NEU, and
 - vii. credits for any benefits provided by the NEU to City taxpayers (e.g., contribution to corporate GHG reductions goals), as determined by Council.
2. That NEU rates fairly apportion the aforementioned costs among customers of the NEU.
3. That NEU rates be understandable to customers, practical and cost-effective to implement.
4. That at least two separate rate classes (commercial and residential) be established to distinguish different types of NEU customers, with rates reflecting each class's proportional contribution to total costs.
5. That, where feasible, NEU rates provide price signals that encourage energy conservation by NEU customers.

²⁵ 2017 Report, p. 8.

²⁶ Ibid., p. 9.

²⁷ 2015 Report, 2016 Report and 2017 Report: Appendix C, pp. 1-2.

6. That the methodology for calculating NEU rates provide year-to-year rate stability for NEU customers to the greatest extent possible.
7. That the methodology for calculating NEU rates provide year-to-year revenue stability for the City to the greatest extent possible, and include the use of a rate stabilization reserve similar to that used by the City for other utility operations.
8. That rates be updated by Council annually based on forecasted costs, and adjusted to reflect any deviation from target levels of reserves, with annual rate changes requiring review and approval by Council followed by enactment of the necessary amendments to the NEU by-law.

1.4.4 Zero Emissions Building Plan

In July 2016, the CoV adopted a Zero Emissions Building Plan that requires most new buildings in Vancouver to have zero operational Greenhouse Gas (GHG) emissions by 2030. The Plan calls for the return to electrically-powered baseboard heat, stating the following:

An unintended consequence of the City's 2011 and 2014 Rezoning Policy for Green Buildings is that it forced builders away from inexpensive to install, low carbon electric baseboard heat and led them to more expensive hydronic heating systems that use natural gas.

Despite these challenges, rapid improvements can be made immediately through the restructuring of the rezoning policy to reduce exposed concrete, improve window performance, shift towards direct ventilation and heat recovery ventilators, and allowing the use of electric heat once again. These requirements can each be stepped up while technologies for renewable creation of hot water at the scale required in MURBs are encouraged and then become normal practice.²⁸

The Plan also describes electricity as renewable energy:

Unlike most jurisdictions around the world, Vancouver's electricity is already close to 100% renewable; Provincial legislation requires BC's grid to be supplied by a minimum of 93% renewable energy and the current mix is over 97% renewable and therefore has very low GHG emissions associated with its use. As a result, while electricity conservation remains important, the focus of this plan is on reducing the demand for fossil fuel based natural gas used primarily for space heating and hot water and transitioning these functions to renewable sources such as electricity (including heat pumps), bio-gas, and neighbourhood renewable energy systems (NRES).

In addition, because grid provided electricity is almost entirely renewable in BC, this Plan does not focus initially on mandatory building scale renewable energy technologies such as solar photovoltaic (PV) as is the case in a number of other leading jurisdictions. This Plan provides flexibility for builders and owners in determining how best to achieve the targeted GHG emission outcomes. One key element of providing flexibility for solutions is through removing barriers to good technologies and solutions such as solar PV.²⁹

²⁸ CoV Zero Emissions Building Plan, p. 17, available at: <http://vancouver.ca/files/cov/zero-emissions-building-plan.pdf>

²⁹ Ibid., pp. 5-6.

2.0 Proposed rate structure and rates

2.1 Description of proposed rates

The SETES provides three thermal energy services: space heating, space cooling and domestic hot water heating. Rental customers only receive the services of space heating and domestic hot water heating.³⁰

SWCRA proposes a rate design consisting of fixed and variable components and a single rate class of customers. SWCRA explains that it chose a fixed/variable rate design for two reasons. First, such rate design would be familiar to customers as it is similar to that of BC Hydro for electricity, FortisBC Energy Inc. for natural gas, and the CoV SEFC NEU for thermal energy. Second, the SETES costs include variable components based on intensity of usage and fixed costs to recover initial investments and ongoing costs.³¹

SWCRA's proposed rate setting methodology is to peg the energy rates to the rates of other utilities.³² Specifically, SWCRA requests that the Commission approve the variable components of the rate to be pegged to BC Hydro's rate and the fixed component of the rate to be pegged to SEFC's rate.³³ SWCRA submits that this methodology aligns well to the Commission's rate setting principles to use the least amount of regulatory oversight and avoid the high cost of regulated cost of service rate setting.³⁴ It also submits that it will reduce the need to apply to the Commission for future rate increases.³⁵

SWCRA elaborates as follows: "Pegging to the rates of other utilities does not mean that the SETES and those other utilities have similar costs, services and customer base. They do not. The rate design and cost structure of the other utilities cannot be fully compared to SETES as those larger utilities have economies of scale, customer base, and redundancy not available to SETES."³⁶

In addition to the fixed and variable rate components discussed above, SWCRA proposes to apply a \$9.50 monthly metering charge per unit.³⁷

The following table summarizes SWCRA's proposed rates, the cost per unit, and the estimated annual cost for customers occupying different sized units and consuming specific amounts of thermal energy. This summary excludes the proposed rate riders, which will be discussed in Section 3 of this Decision.

³⁰ SWCRA, Final Argument dated June 12, 2017, p. 20.

³¹ Exhibit B-1-1, p. 10.

³² SWCRA Final Argument dated June 12, 2017, p. 10.

³³ Exhibit B-1-1, p. 11.

³⁴ SWCRA Final Argument dated June 12, 2017, p. 10.

³⁵ Exhibit B-1-1, p. 11.

³⁶ SWCRA Final Argument dated June 12, 2017, pp. 10-11.

³⁷ Exhibit B-20, Appendix A2, Section C – Rate Schedule, Subsection C1 – Basic Charges.

Table 1: Sample Annual Bills for Different Size Units based on Estimated Consumption³⁸

	775 Sqft Unit		1,300 Sqft Unit		2,000 Sqft Unit	
Charge	# of Units	Annual Cost	# of Units	Annual Cost	# of Units	Annual Cost
Space Cooling \$0.0518 per kWh	350 kWh	\$18.13	750 kWh	\$38.85	850 kWh	\$44.03
Space Heating \$0.1036 per kWh	3,750 kWh	\$388.50	7,900 kWh	\$818.44	12,000 kWh	\$1,243.20
Domestic Hot Water \$0.1036 per kWh	1,000 kWh	\$103.60	2,150 kWh	\$222.74	3,850 kWh	\$398.86
Capacity Charge \$0.0489 per sqft per month	775 sqft	\$454.77	1,300 sqft	\$762.84	2,000 sqft	\$1,173.60
Metering Charge \$9.50 per Month	N/A	\$114.00	N/A	\$114.00	N/A	\$114.00
Total		\$1,079.00		\$1,956.87		\$2,973.69

Each component of SWCRA's proposed rates is discussed below.

Capacity charge

SWCRA submits that the fixed area cost has been selected to match the SEFC rates as of 2016 which was \$0.526 per square metre (m²). SWCRA provides the formula to convert the SEFC rate in \$/m² to a rate in \$ per square foot (SF) as:³⁹

$$0.0489 \left[\frac{\$}{sqft - month} \right] \cdot \left(\frac{1[ft]}{12[in]} \right)^2 \cdot \left(\frac{1[in]}{25.4[mm]} \right)^2 \cdot \left(\frac{1000[mm]}{1[m]} \right)^2 = 0.05263552 \left[\frac{\$}{m^2} \right]$$

$$= 0.526 \left[\frac{\$}{sqm - month} \right] \text{ when truncated}$$

SWCRA proposes to peg the rate increase for the area charge against SEFC area rates, specifically the "Class 1 – SEFC residential or mixed use residential building" rate.⁴⁰ The SEFC Class 1 monthly levy was selected because, like SETES, SEFC must similarly maintain the thermal capacity of a plant that consists of electric heat pumps and gas fired boilers and the associated distribution system.⁴¹

SWCRA proposes a universal monthly capacity levy charge to be applied to all customers⁴² because this reduces customer confusion and metering complexity, and consequently utility costs.⁴³ Furthermore, SWCRA describes the integrated nature of the central thermal energy controller known as the "Thermenex" system to direct heating/cooling energy at varying temperatures to demands in real time. The Thermenex system allows recovery of heat typically discarded, such as rejected heat from space cooling and parkade exhaust shafts. Cooling is provided by the same heat pumps that can be used to provide space heating.⁴⁴

While some customers (i.e. rental units) do not receive cooling service, SWCRA is of the view that a reconfiguration of the monthly capacity levy to provide different monthly capacity levies for strata units

³⁸ Exhibit B-1-1, p. 9.

³⁹ Ibid., p. 11.

⁴⁰ Ibid., p. 13.

⁴¹ SWCRA Final Argument dated June 12, 2017, p. 12.

⁴² Ibid., p. 20.

⁴³ Exhibit B-2, BCUC IR 12.4.

⁴⁴ SWCRA Final Argument dated June 12, 2017, pp. 7-8.

(receiving all three services) and rental units (receiving no space cooling) would necessitate consideration of at least the following two elements:

- An additional layer of regulatory complexity would be added by providing a different monthly capacity levy to rental units as a weighting factor would need to be applied to the residential rental apartment customers while a compensatory weighting would also need to be applied to the non-residential rental apartment customers (i.e., rental building common areas) to maintain comparable total revenue.⁴⁵
- The rental apartment customers derive benefit from the cooling/heating equipment even though they are not provided space cooling service to their residences. This is because some equipment is used for both space cooling and space heating. SWCRA states that there is a limited amount of equipment, namely the chilled water distribution piping which is solely used for space cooling and does not provide a direct space heating function. However, the chilled water distribution piping is essential to the heat recovery function. Without the space cooling being operational, the heat recovery is not possible.⁴⁶

Variable space and water heating and variable cooling charges

SWCRA describes the proposed variable component of the rates as follows:

- The variable cost for space heating and domestic hot water heating match the arithmetic mean of Step 1 and Step 2 of BC Hydro's RS 1101 (residential) approved on April 6, 2016, and is calculated in accordance with the following formulas:

$$C_{\text{Space Heating, Variable}} = \frac{C_{\text{BC Hydro, Residential Step 1}} + C_{\text{BC Hydro, Residential, Step 2}}}{2}$$

$$C_{\text{Space Heating, Variable}} = \frac{8.29 \left[\frac{\text{cents}}{\text{kWh}} \right] + 12.43 \left[\frac{\text{cents}}{\text{kWh}} \right]}{2} = 10.36 \left[\frac{\text{cents}}{\text{kWh}} \right]$$

- The variable cost for space cooling per unit is half of the proposed unit cost for space heating and domestic hot water.
- Rate increases are anticipated to be determined by the following:
 - Space Cooling – To be pegged against half of the arithmetic mean of BC Hydro residential rates for electricity;
 - Space Heating – To be pegged against the arithmetic mean of BC Hydro residential stepped rates for electricity; and
 - Domestic Hot Water – To be pegged against the arithmetic mean of BC Hydro residential stepped rates for electricity.⁴⁷

SWCRA provides the following rationale for pegging the SETES usage dependent charges to BC Hydro's residential RS 1101 energy charge:

- CoV Greenest City plan intends for neighbourhood energy systems (such as Shannon Estates TES) to replace natural gas energy with renewable energy;
- CoV obligates SWCRA to design the TES as a low-carbon system to achieve 70 percent of annual heating requirements from low-carbon source(s);
- CoV policy obligates all space heating and domestic hot water heating in the service area of Shannon Estates TES to be provided by the TES;

⁴⁵ SWCRA Final Argument dated June 12, 2017, p. 20.

⁴⁶ Ibid., pp. 20-21.

⁴⁷ Exhibit B-1-1, pp. 10-12.

- The standard of practice for low-carbon source(s) in Vancouver is electricity; and
- The low-carbon heat recovery system is electrically-driven. The TES location precludes or already uses other low-carbon non-electric energy sources.⁴⁸

SWCRA provides the following additional explanation:

The arithmetic mean was selected to address the interactions of energy and demand charges from electricity and energy charges / taxes from natural gas. SETES purchases electricity via BC Hydro's Large General Service tariff which differs from the Residential tariff in energy charges, also has a demand charge, and has a conservation component based on a historical baseline. Natural gas is also purchased. To "use the least amount of regulatory oversight," which is a rate setting principle of BCUC, the mean was selected as opposed to requesting a regulated cost of service rate-setting mechanism where precise amounts of electricity energy / demand / natural gas and carbon reduction targets would need to be forecasted for a period and adjustments made for previous periods with additional factors for the gas tariff and the multi-variable electric tariff. The cooling process is more energy efficient (from the perspective of generating/absorbing a unit of heat) than space heating / domestic hot water processes so the charges for recovering costs are also accordingly set lower. The advantages however of a refrigeration cycle in energy efficiency are reduced by the high rate of energy consumption (demand) required to absorb and reject heat and to distribute chilled water. There is an additional energy demand charge beyond the energy charge to SETES. Therefore, the rate is selected to account for the increased energy efficiency of cooling and the increased electricity demand.⁴⁹

Metering charge

SWCRA proposes to apply a \$9.50 monthly metering charge per unit.⁵⁰ SWCRA confirms this charge is designed to recover the cost of reading the meters, since the meters' capital cost is included in the SETES capital cost of \$7.5 million approved in the CPCN.⁵¹ SWCRA explains that the meters are located in individual apartments and condominium units, but there are also meters for the entire apartment building or each strata building.⁵² However, SWCRA confirms that it does not have to physically enter a unit to read the meters when the automated reporting systems are working. If the automated system is not working, a manual meter read is required, which requires access to the Building.⁵³

SWCRA clarifies that although the monthly bills are individually generated by computer, human oversight is still required at the Building main level for heating/cooling/DHW and at the plant level for each of the circulation loops, main plant equipment, and circulation pumps. The estimated monthly costs for these activities are as follows:⁵⁴

⁴⁸ Exhibit B-1-1, p. 11.

⁴⁹ SWCRA Final Argument dated June 12, 2017, p. 11.

⁵⁰ Exhibit B-20, Appendix A2.

⁵¹ Exhibit B-2, BCUC IR 10.1, 10.2.

⁵² Ibid., BCUC IR 10.3, 10.4.

⁵³ Exhibit B-20, BCUC IR 73.1.

⁵⁴ Exhibit B-20, BCUC IR 73.2, 73.2.1.

Action	Estimated Time/Month	Estimated Cost
Checking of Building Main level meters	2h	\$240
Checking of the plant level meters	2h	\$240
Checking of equipment meters/input energy consumption	1h	\$120

SWCRA states that meters in individual units may be flagged for audit and warrant further investigation. Also, the metering data must be checked for errors caused by power interruption and any logging errors remediated. The estimated costs for these activities are as follows:⁵⁵

Action	Estimated Time/Month	Estimated Cost
Trouble shooting individual meters *Average per month	0.5	\$60
Remediation after power interruption *Average per month	1h	\$120

2.2 Alternatives to SWCRA's rate proposal

SRG proposal

Subsequent to SWCRA filing its Updated Application, SRG retained EES to review and assess the Updated Application and resulting rates. EES filed a report with the conclusions and recommendations resulting from that review. In that report, EES provides an alternative rate proposal which also has fixed and variable components and pegs the variable rate to BC Hydro's rate. However, this alternative rate proposal does not propose pegging the capacity charge to SEFC.⁵⁶

EES provides the following analysis in its report:

There are many issues that were not adequately addressed by SWCRA, as pointed out in the Final Submission of FAES dated July 11, 2016. SRG agrees with the following points made by FAES Final Submission, which includes the following key points:

- SWCRA does not provide an equitable balance of risk and cost between the utility and ratepayers
- SWCRA does not provide transparent treatment of controllable costs
- SWCRA has not adequately addressed the potential for rate shock
- Rates are high compared to business as usual
- There is no basis to find that rates are just and reasonable

⁵⁵ Exhibit B-20, BCUC IR 73.3.

⁵⁶ Exhibit C7-16.

Despite the fact that SWCRA filed an updated application after the FAES Final Submission was made, SWCRA did not address the inadequacies pointed out by FAES. The primary change in the application was a request to recover additional costs from ratepayers.⁵⁷

The EES report also raises issues with SWCRA's proposal to peg rates to both SEFC and BC Hydro. EES points to SWCRA's explanation for why the energy rate for the SETES should be higher than SEFC's and thus pegged to BC Hydro due to technical differences in the SEFC and SETES systems. In response to this explanation, EES states: "While this may be interesting, it is not relevant given that SWCRA was willing to accept the fixed rate used by SEFC despite the differences in technology and that SWCRA instead used a variable rate from BC Hydro despite the fact that it is an entirely different technology."⁵⁸

EES comments on the fact that the proposed rates are not tied to the costs of the project and are not based solely on the rate of another utility provider, stating: "While there is no issue with the use of a hybrid approach in general terms, further analysis is required to ensure that rates are not excessive compared to other alternatives and that profit is not excessive relative to other utilities." EES further states: "The rates as proposed are not transparent or comparable enough for a direct determination of reasonableness."⁵⁹

EES submits that most of the estimates and assumptions used by SWCRA in the financial model are very conservative, leading to lower revenues and earnings than might otherwise be achieved. In EES's opinion, because the estimates are too low, SWCRA stands to benefit, at the expense of the ratepayer, if actual earnings are higher. EES looked at several of the key outputs that appeared to be on the low side based on actual results for 2016 and EES's knowledge and experience related to various factors. Based on this information, EES developed a Low, Medium and High case for the various inputs. Generally, EES used the SWCRA inputs as the Low case, its own estimates as the High case and the mid-point in between the High and Low cases as the Medium case. In each of the three cases, EES calculated an Internal Rate of Return (IRR) for the project.⁶⁰ The IRR was then compared to the "Generic Benchmark" weighted average cost of capital (WACC) and return on equity (ROE) for TES projects which was established in the BCUC Generic Cost of Capital Stage 2 Decision.⁶¹

EES provides the following table, which summarizes the earnings (IRR) that would accrue under the rates as proposed by SWCRA in the Low, Medium and High cases.

Table 1				
Earnings Based on Rates Proposed by SWCRA				
	Low	Medium	High	Generic Benchmark
Return on Full \$7.5 Million Investment	7.1%	10.7%	14.0%	5.7%
Return on 42.5% Equity Using Generic Cost of Capital Approach	12.5%	18.2%	23.5%	9.5%

EES describes its proposed approach to setting SETES rates as follows:

Based on the overly conservative assumption used by SWCRA when proposing rates for the SETES and the potential for large windfall profits, SRG proposes that rates be set to better balance the risk between SWCRA and its ratepayers. We believe this is done through the use of

⁵⁷ Exhibit C7-16, p. 1.

⁵⁸ Ibid., p. 2.

⁵⁹ Ibid.

⁶⁰ Ibid., p. 3.

⁶¹ BCUC Generic Cost of Capital Proceeding (Stage 2) Decision, pp. 123-124.

the medium or high case assumptions and using the generic cost of capital approach to ensure that the ROE is no more than 9.5%...

...The SETES rates have three main components: the capacity levy, the metering charge and the variable rate. SRG proposes that the metering charge be maintained as proposed by SWCRA, that the variable rate be set at the Step 1 rate for BC Hydro or less, and that the capital levy be adjusted until the ROE equals 9.5%.⁶²

With regard to the capacity charge, EES submits that it should be escalated at two percent annually. EES further submits that “[t]ying the rate to the SEFC rate is not necessary and allows the potential for greater risks and rewards” and that as the “capital cost is not changing over time and any repairs and replacements will be collected through rate riders, a fixed escalation factor is more appropriate.”⁶³

EES proposes that the variable rate be set at the Step 1 rate for BC Hydro or less. EES submits the Step 1 rate is more appropriate than the SWCRA proposal because the installation of the SETES allows for an efficient method of heating and cooling. This is equivalent to customers that spend capital for demand-side management (DSM) measures to reduce their overall electric use so that they consume power within Step 1 levels. EES agrees that the energy rate for cooling should be half of the energy rate for space and water heating.⁶⁴

The following table summarizes EES’s proposed rates, the cost per unit, and the estimated annual cost for customers occupying different sized units and consuming specific amounts of thermal energy. To allow for a comparison with SWCRA’s proposed rates, the calculations are based on the Low assumptions. This summary excludes SWCRA’s proposed rate riders, which will be discussed in Section 3 of this Decision.

Table 2: Sample Annual Bills for Different Size Units based on Estimated Consumption (Low case)⁶⁵

	775 Sqft Unit		1,300 Sqft Unit		2,000 Sqft Unit	
Charge	# of Units	Annual Cost	# of Units	Annual Cost	# of Units	Annual Cost
Space Cooling \$0.0429 per kWh	350 kWh	\$15.02	750 kWh	\$32.18	850 kWh	\$36.47
Space Heating \$0.0858 per kWh	3,750 kWh	\$321.75	7,900 kWh	\$677.82	12,000 kWh	\$1,029.60
Domestic Hot Water \$0.0858 per kWh	1,000 kWh	\$85.80	2,150 kWh	\$184.47	3,850 kWh	\$330.33
Capacity Charge \$0.0263 per sqft per month	775 sqft	\$244.59	1,300 sqft	\$410.28	2,000 sqft	\$631.20
Metering Charge \$9.50 per Month	N/A	\$114.00	N/A	\$114.00	N/A	\$114.00
Total	\$781.16		\$1,418.75		\$2,141.60	
% Reduction from SWCRA's proposed rates	27.60%		27.50%		28.00%	

⁶² Exhibit C7-16, p. 7.

⁶³ Ibid.

⁶⁴ Ibid.

⁶⁵ Calculations based on rate proposal in Exhibit C7-16, Table 3, p. 7.

SWCRA reply to SRG's proposal

SWCRA disputes SRG's claim that SWCRA does not provide an equitable balance of risk and cost between the utility and ratepayers and submits that SRG's position appears to be based on its assumptions about the later part of the 30-year period where, if the applied-for rates are approved and remain unchanged for 30 years and the future unfolds as assumed in the financial model, then there would be a risk of excessive earnings later in the 30-year period. SRG proposes to address that assumed future risk by reducing the initial rates and adjusting the rate setting methodology to reduce rate increases over the 30-year period. SWCRA replies that SRG is asking the Commission to set inadequate rates now as mitigation for a highly speculative future risk.⁶⁶

SWCRA further submits that SRG's proposed rates would not be just and reasonable or equitable because the proposed rates would significantly prolong the period of time over which SWCRA is expected not to recover its costs and earn a reasonable return. Moreover, SRG does not propose a regulatory accounting mechanism to smooth out rates and returns over the period; SRG's proposal would simply reduce rates to an insufficient level which is not balanced. SWCRA submits that the Updated Application does provide an equitable balance of risk and cost between the utility and ratepayers for the following reasons:

- the applied-for rates are expected to provide low to reasonable returns on average over the initial ten years of operation;
- the rates include capacity and consumption dependent components and standard charges to align the charges to services rendered; and
- the impacts of significant irregular costs are balanced by having the utility fund these costs and record them in deferral accounts for recovery by rate rider rather than reflecting them in the base rates.⁶⁷

SWCRA refutes the validity of SRG's assertion that rate competitiveness is a factor to include in a Stream B TES Rates Application, with reference to the TES Guidelines Section 2.4.4 (iii). SWCRA argues that SRG misunderstands the circumstances in which rate competitiveness information might be considered and stresses that the TES Guidelines "actually state that information confirming the proposed rates will be competitive with other service options that are available to customers in the new service area is to be provided if appropriate."⁶⁸ Given that thermal energy services from the other utilities are not available to customers in Shannon Estates, SWCRA concludes that the competitiveness of SETES rates relative to service options that are not available to customers in Shannon Estates is not relevant.⁶⁹

Regarding SRG's claim that there is no basis to find that SWCRA's proposed rates are just and reasonable, SWCRA points out that just and reasonable rates are traditionally set on the basis of providing the utility a reasonable opportunity to recover reasonable costs and earn an approved/benchmark rate of return on a rate base based on an approved/benchmark capital structure. SWCRA submits that whether SWCRA's or SRG's assumptions are used, average returns over the first ten years of operations are predicted to be low to reasonable compared to applicable benchmarks.⁷⁰ SWCRA submits that the proposed rates are not expected to recover the utility's expenses and earn a reasonable return for many years. Even using SRG's "medium case" and "high case" assumptions, which use actual 2016 load results to forecast load in 2017 and beyond, SRG estimates that SWCRA's proposed rates will yield an average rate of return of 1.4 percent over the 2016 to 2022 period. Accordingly, if the load remains higher than the forecast for the initial years, this would not be expected to result in over-recovery of expenses. SWCRA also submits that SRG uses metrics such as cash flow IRR, accumulated free cash flow and net-present value (NPV) in support of its proposal, but these metrics are not traditionally used or appropriate for rate making purposes.⁷¹

⁶⁶ SWCRA Reply Argument dated July 12, 2017, pp. 2-3.

⁶⁷ Ibid., p. 3.

⁶⁸ Ibid., p. 16.

⁶⁹ Ibid.

⁷⁰ Ibid., p. 6.

⁷¹ SWCRA Final Argument dated June 12, 2017, p. 15; SWCRA Reply Argument dated July 12, 2017, p. 5.

Mr. Duffy proposal

Mr. Duffy proposes an alternative rate structure consisting of a fixed/variable rate, where each component is set at a lower initial level than proposed by SWCRA. Based on his analysis, Mr. Duffy proposes a Monthly Capacity Levy of \$0.025/sqft which would increase annually by inflation, but does not elaborate on the basis for this proposal.⁷² Mr. Duffy also proposes that the variable rate be set at the BC Hydro Step 1 level.

SWCRA reply to Mr. Duffy's proposal

SWCRA has calculated the projected average ROE based on its understanding of Mr. Duffy's rate proposal, and the results are in the table below. SWCRA assumed that Mr. Duffy proposed the space cooling rate at half the BC Hydro Step 1 rate and also assumed all other charges as applied for; however, Mr. Duffy's proposal was silent on these points.

Analysis Period	2016-2021	2016-2025	2016-2045
Return on Equity	-5.33%	-7.71%	-26.95%

SWCRA states that on the basis of the above results, Mr. Duffy's proposed rate structure would be "unjust and unreasonable within the meaning of the *UCA*."⁷³

Mr. Peden submission

Mr. Peden does not make an alternative rates proposal; however, he requests that the Commission "reverse the current rates, monthly charges of [the] thermal system to a more reasonable level..."⁷⁴ Mr. Peden also submits that "[t]he monthly charge of \$9.50 is far excessive for simply sending out email invoices every month. No actual checking of a meter is done because the charges are not for utilities used but simply for an excessive levy."⁷⁵

SWCRA reply to Mr. Peden

SWCRA replies that each customer building and premises has separate metering for each thermal energy service billed to the building/premises, which could be: (i) domestic water heating, (ii) space heating, and (iii) space cooling. Each rental unit has a hot water baseboard meter (for measuring and billing space heating energy). Each strata unit has two fan coil meters (for measuring and billing energy for each of space heating and space cooling) and a domestic hot water meter. There are also meters for each thermal energy service at the whole building level for each building. The monthly metering charge is intended to recover the costs of recording the meters, verifying digital equipment addresses to physical addresses and customers, verifying data validity and substituting appropriate estimations of energy consumption when necessary, and maintaining the automated retrieval and summary system.⁷⁶

2.3 Other rate-related issues

2.3.1 Rate competitiveness and comparison to other utilities

As previously stated, SWCRA proposes to peg its energy rates to two separate utilities – SEFC NEU and BC Hydro. Thus, SWCRA's rate proposal is not tied to its actual costs, or revenue requirements.

⁷² Mr. Duffy Final Argument, p. 4.

⁷³ SWCRA Reply Argument dated July 12, 2017, p. 11.

⁷⁴ Mr. Peden Final Argument, p. 2.

⁷⁵ Ibid., p. 1.

⁷⁶ SWCRA Reply Argument dated July 12, 2017, pp. 1-2.

SWCRA explains its rationale for its proposal to peg its rates to multiple utilities as opposed to one utility as follows:

The selection of multiple utilities reflects SWCRA’s best judgment of what would constitute applicable rates while balancing the various requirements for minimizing regulatory burden, accounting for the risks of a new business with new applications of technology, and for fair and reasonable rates. No single utility captured all of the analyzed elements on its own while multiple utilities allowed SWCRA to pick reasonable measures from major utilities that are expected to be familiar to Customers and comparable in nature to SWCRA.

Referencing existing well known utilities (BC Hydro and SEFC) allows SWCRA and the Commission to leverage the existing regulation of these utilities by BCUC / City of Vancouver / Government of BC, avoiding the potentially large cost burden of setting SWCRA rates on a cost-of-service basis.⁷⁷

When asked if SWCRA considers BC Hydro to be a relevant comparison, SWCRA responded as follows:

While BC Hydro residential service offers some customer benefits (individual billing) and social benefits of SETES (low carbon footprint), there are some fundamental differences. BC Hydro distributes electricity, which must be converted via building or customer equipment in useful thermal energy, this puts the burden of ownership and maintenance onto the utility customer. The estimated utility costs to the customer are comparable.⁷⁸

When asked if SWCRA considers other TES utilities including SEFC, Corix or Creative Energy to be relevant comparisons, SWCRA responded as follows:

The SWCRA Utility operates with a different set of circumstances including resources, heating and cooling services and customer base as compared to each of SEFC, Corix and Creative Energy...the relative ranking of a utility’s rates as compared to the rates other utilities has limited relevance to determining whether the utility’s rates are just and reasonable.⁷⁹

SWCRA further states that “the City of Vancouver has intentionally limited customer choice to only Shannon Estates TES, therefore there are no comparable sources available for pricing.”⁸⁰

In response to Commission IRs, SWCRA provided a comparison of its proposed rates to BC Hydro’s rates.⁸¹

In the table below, the SETES rates include the capacity charge, meter charge, and all the variable charges for space heating and cooling and DHW.

Monthly		
	SETES	BC Hydro
775 sq ft	\$ 147	\$ 118
2000 sq ft	\$ 220	\$ 162
Annual		
	SETES	BC Hydro
775 sq ft	\$ 1,762	\$ 1,419
2000 sq ft	\$ 2,634	\$ 1,942

⁷⁷ Exhibit B-20, BCUC IR 83.1.

⁷⁸ Ibid., BCUC IR 84.1.

⁷⁹ Ibid., BCUC IR 85.3.

⁸⁰ Exhibit B-1-1, p. 11.

⁸¹ Exhibit B-5, BCUC IR 39.1.

SWCRA also provided the following comparison of its proposed rates to other TES utilities' rates.⁸²

As shown in the table below, SWCRA recalculated the SETES monthly and annual bills to exclude the meter charge and the space cooling charge, as SEFC, Corix DES at UBC and Creative Energy supply energy at the building level, do not take into account individual metering, and do not supply cooling.

Monthly				
	SEFC	Corix	Creative	SETES*
775 sq ft	\$ 81	\$ 74	\$ 58	136
2000 sq ft	\$ 145	\$ 136	\$ 64	207
Annual				
	SEFC	Corix	Creative	SETES*
775 sq ft	\$ 972	\$ 884	\$ 695	1635
2000 sq ft	\$ 1,746	\$ 1,629	\$ 770	2481
*SETES minus metering and space cooling fees				

SWCRA provided the following explanation for why it considers its rates to be just and reasonable within the meaning of section 60 of the UCA:

The relative ranking of a utility's rates in relation to the rates of other utilities has limited relevance to determining whether the utility's rates are just and reasonable. Section 60 of the UCA does not require the Commission, in setting a rate for a utility, to have due regard to the rates of other utilities. Section 60 does not include a reference to other utilities. The criteria under sections 59 and 60 of the UCA focus on the particular circumstances and services of the specific utility for which rates are to be set.⁸³

SWCRA cites the Commission's decision on FortisBC Inc.'s 2012-13 Revenue Requirements Application, where the Commission confirmed that it does not have a statutory mandate to ensure that the utilities under its jurisdiction have similar rates:

FortisBC operates with a different set of supply resources and with a different customer base in terms of geography, population density and the residential/commercial/industrial mix it faces. The Commission panel has no mandate, nor does it find it appropriate, to require FortisBC to manage its utility business to produce rates or programs identical to those of BC Hydro. The Commission Panel believes that FortisBC's responsibility is to provide safe and reliable service in a cost-effective manner consistent with British Columbia's energy objectives. To do so, FortisBC must design and manage its system based on the resources available to it and the needs of its customers. This, at times, may result in rates that are greater than those of BC Hydro and potentially times when they are less.⁸⁴

SWCRA submits that the SETES utility operates with a different set of circumstances as compared to other utilities, including:

- resources (SETES has solar, natural gas boilers, heat pumps, effluent heat recovery, whereas other TES have only natural gas boilers);
- heating and cooling services (SETES provides three thermal energy services delivered to each individually metered unit, whereas other TES provide a single service to a single thermal energy transfer station per building); and

⁸² Exhibit B-5, BCUC IR 40.1.

⁸³ Exhibit B-20, BCUC IR 85.1.

⁸⁴ Ibid.

- customer base (SETES is an order of magnitude smaller than the other utilities in terms of customer base, and several orders of magnitude smaller than BC Hydro).⁸⁵

Intervener arguments

SRG submits that rate competitiveness is a measurement available to the Commission to ensure that a utility does not abuse its monopoly power. SRG notes that SWCRA tries to counter the argument of SRG and several other parties, arguing that the competitiveness of its rates is not relevant. It states that:

Its position then, is that its rates may be extremely high and bear no relation to the rates of other customers receiving the same services in similar circumstances. This thinking is characteristic of a monopoly, which the applicant is. It is wrong in principle and it is wrong in law.⁸⁶

Furthermore, SRG submits that SWCRA relies on a “strained interpretation” of section 2.4.4 (iii) of the TES Guidelines and the phrase “new service area.” SRG submits that this section confirms the importance of rate competitiveness and the words “new service area” do not restrict the Commission’s statutory mandate to protect the public interest. In particular, sections 59 and 60 of the UCA provide that “the Commission must consider all matters that it considers proper and relevant affecting rates” and it “must have due regard to the setting of rates that are not unjust or unreasonable.” Thus, SRG concludes that rate competitiveness is a relevant consideration.⁸⁷

SWCRA reply argument

SWCRA agrees that in setting a rate the Commission has broad discretion under section 60(1)(a) of the UCA as to the matters which it may consider as affecting the rate, but since the Supreme Court of Canada’s decision in *British Columbia Electric Railway Co. v. Public Utilities Commission of British Columbia* [1960] SCR 837 it has been clear that when it comes to actually setting the rate the Commission must give priority to the factors prescribed in section 60(1)(b) of the UCA - the Commission must have due regard to the setting of a rate that is not unjust or unreasonable within the meaning of section 59(5) of the UCA. This means that when it comes to actually setting the rate, the priority and focus is on whether the rate is sufficient and no more than necessary given the utility’s expenses to provide the nature and quality of service. In accordance with the UCA, the Commission ensures that the interests of customers and the utility are balanced by setting rates that are sufficient and no more than necessary for service of the nature and quality provided by the particular utility.⁸⁸

2.3.2 SWCRA’s financial forecasts

While SWCRA is not proposing to set its rates based on its forecast load and costs, it did provide a financial model detailing its forecast load and operating and capital costs on an annual basis up to the year 2045.⁸⁹ SWCRA also provided a “Generic Cost of Capital” financial model in response to BCUC IR No. 3 (GCOC Model).⁹⁰ Based on SWCRA’s calculations in the GCOC Model, SWCRA’s ROE between the years 2016-2020 ranges from 0.49 percent to 6.81 percent; however, in 2020, SWCRA’s ROE is calculated to be 17.17 percent. The ROE continues to increase annually beyond 2020.⁹¹

⁸⁵ SWCRA Final Argument dated June 12, 2017, p. 17.

⁸⁶ SRG Final Argument, p. 2.

⁸⁷ Ibid.

⁸⁸ SWCRA Reply Argument dated July 12, 2017, p. 6.

⁸⁹ Exhibit B-1-1, Appendix E, SWCRA Financial Model.

⁹⁰ Exhibit B-20, Appendix B, GCOC Financial Model.

⁹¹ Ibid., Tab GCOC Model, Row 91.

In response to Panel IRs, SWCRA provided the following table showing the forecast and actual load for July through December 2016.⁹²

2016 Half a Year						
	[Unit]	Forecast	Actual	Variance \$	Variance %	
Load	Space Cooling - kWh	[kWh]	73,959	39,331	-34,628	-47%
	Space Heating - kWh	[kWh]	535,644	1,264,243	728,599	136%
	Domestic Hot Water -kWh	[kWh]	100,225	342,372	242,147	242%
			709,828	1,645,946	936,118	132%

SWCRA explains that the forecast loads are based on compiled usage statistics and industry and engineering best practice assumptions for weather, occupancy rates and number of occupants for rental and strata units, customer usage patterns and building envelope performance.⁹³

SWCRA submits that the higher than forecast consumption for July-December 2016 can be explained primarily by abnormally cold weather in Vancouver in December 2016 and higher customer usage due to:

- Hot water consumption being greater than typical. SWCRA surmises that customers may not have adjusted their consumption for paid service during July-December 2016 after being provided with up to six months of service without charge and greater familiarity with thermal energy billing can be assumed to reduce usage to align more to the compiled statistical averages; and
- Commissioning and construction thermal energy losses. SWCRA explains that sections of piping insulation were removed during construction work related to Phase 2 extensions, causing increased thermal energy losses, but this situation is temporary during construction and thermal losses should reduce as a portion of operational energy once extension connections have been made and piping insulation re-applied.⁹⁴

SWCRA submits that it would not be reasonable to use the historical data from the second half of 2016 to directly forecast sales for 2017 and beyond for the following reasons:

- The data does not reflect the four seasons of Vancouver;
- It only includes a single data collection period to forecast 29 more years;
- The winter weather pattern appeared to be an outlier;
- It only includes Shannon Estates Phase 1; and
- It includes a period of adjustment for customers from no thermal energy billing to thermal energy billing.⁹⁵

SWCRA expects that the measured consumption will exhibit less deviation from the projected figures under more typical weather conditions and stabilized user demand. However, by the nature of being a small-scale TES there will almost always be a greater degree of volatility in actual demand compared to larger utilities.⁹⁶

SWCRA noted that it is not opposed in principle to a deferral account mechanism to capture the impact to revenue due to uncertain load or cost of energy; however, SWCRA is of the view that a key disadvantage of such

⁹² Exhibit B-21, Panel IR 1.3.

⁹³ SWCRA Final Argument dated June 12, 2017, p. 12.

⁹⁴ Ibid., pp. 12-13.

⁹⁵ Ibid., p. 14.

⁹⁶ Ibid.

a mechanism is that it would appear to require a cost of service revenue requirement based on forecasts of load and revenue, which is not what SWCRA proposes.⁹⁷

2.4 Panel determinations on proposed rate structure and rates

The Panel has a number of concerns regarding SWCRA's proposed approach to setting its rate structure and rates and, as a result of these concerns, the Panel is not persuaded that the rates as proposed by SWCRA are just and reasonable.

The primary issue with SWCRA's proposed rates is that, based on the evidence presented, it appears that over the life of the project SWCRA's earnings and ROE will be higher than what is generally considered acceptable for regulated Stream B TES utilities. This is shown in the evidence presented by SRG's consultant EES. Even under EES's "Low" case, which uses the assumptions and inputs in SWCRA's financial model, the IRR over 30 years is 7.1 percent compared to the benchmark WACC of 5.7 percent, and the ROE is 12.5 percent compared to the benchmark of 9.5 percent (for Stream B TES utilities).⁹⁸

SWCRA argues that while its earnings may be higher than benchmark in the later years of the project, its earnings in the early years are well below the benchmark; thus, averaging earnings over a 30-year time period is not appropriate. Further, if rates begin to yield "excessive" earnings at some point in the future, the Commission has the ability to set lower rates.

The Panel does not consider these arguments sufficient to justify approving rates which, based on SWCRA's own calculations in its GCOC Model, may lead to inappropriately high earnings in the medium to long term.

SWCRA states that "just and reasonable rates are traditionally set on the basis of providing the utility a reasonable opportunity to recover reasonable costs and earn an approved/benchmark rate of return on a rate base based on an approved/benchmark capital structure."⁹⁹ Given SWCRA's proposal, the "traditional" method for assessing just and reasonable rates is not applicable in this proceeding. However, SWCRA has not provided sufficient evidence or explanation for the Panel to assess just and reasonable rates in an alternative manner.

Based on the financial models provided in this proceeding, it is not clear to the Panel what the actual ROE is likely to be in the medium to long term. The actual load for the second half of 2016 was much higher than forecast by SWCRA, which raises concerns that SWCRA's load forecast may be too conservative, thus understating actual ROE results. The Panel is therefore not confident in the forecasts presented by SWCRA. Further, the fact that SWCRA is forecasting to under-earn its ROE in the early years of the development is mainly tied to the fact that the development will not be fully built out until 2019-2020. This is further evidenced by the fact that even though the ROE in the early years is very low, once full build-out is reached the ROE increases rapidly and is shown to be very high in the medium to long term.

The Panel also takes issue with the piecemeal approach SWCRA has taken when pegging its rates to other utilities. This is particularly concerning given that SWCRA's proposed rates result in rates that are higher than other utilities' rates reviewed in this proceeding, including BC Hydro and SEFC. SWCRA argues that it is not appropriate to compare its proposed rates to other utilities. The Panel disagrees with SWCRA's statement. Given that SWCRA is not basing its rates and rate structure on the costs of the system, the Panel must use other methods for determining whether the rates are just and reasonable, such as comparing the rates to other utilities.

⁹⁷ SWCRA Final Argument dated June 12, 2017, p. 15.

⁹⁸ BCUC Generic Cost of Capital Stage 2 Decision, pp. 123-124.

⁹⁹ SWCRA Reply Argument dated July 12, 2017, p. 6.

The Panel disagrees with SWCRA statement that because the CoV has limited customer choice to only the SETES, there are no comparable sources available for pricing. As stated in this Decision, the CoV has similarly limited customer choice to only SEFC within a defined service area; yet, the CoV publishes an annual report comparing the SEFC NEU rates to those of other service providers, including BC Hydro, FortisBC and other TES providers. More importantly, the CoV Council approved a target to limit the SEFC NEU rates to no greater than a 10 percent premium above the BC Hydro rate.

Furthermore, the Panel notes that the TES Guidelines require an applicant to discuss the competitiveness of its rates and that it has jurisdiction to consider the competitiveness of rates as part of the considerations under section 60(1)(a) of the UCA.

The Panel provides the following calculations based on the rate comparison presented in the above sections of this Decision:

Unit Size (sqft)	Monthly bills			Percentage Difference	
	SETES [A]	BC Hydro [B]	SEFC [C]	[A/B]-1	[A/C]-1
775	\$147	\$118	\$81	25%	81%
2,000	\$220	\$162	\$145	36%	52%

The Panel finds that, if approved as requested, the Shannon Estates ratepayers would face thermal energy rates significantly higher than the energy rates of the two utilities against which it proposes to peg components of its rate. The percentage of rate difference could be even higher as the SETES rates used in this comparison do not include any of the proposed rate riders.

The Panel also finds that SWCRA has not adequately justified why it has chosen to peg its capacity charge to SEFC and its variable charges to BC Hydro. On the one hand, SWCRA states that it has chosen to peg its capacity charge to the SEFC Class 1 monthly levy because “like SETES, SEFC must similarly maintain the thermal capacity of a plant that consists of electric heat pumps and gas fired boilers and the associated distribution system.”¹⁰⁰ On the other hand, SWCRA argues the following:

[p]egging to the rates of other utilities does not mean that the SETES and those other utilities have similar costs, services and customer base. They do not. The rate design and cost structure of the other utilities cannot be fully compared to SETES as those larger utilities have economies of scale, customer base, and redundancy not available to SETES.”¹⁰¹

The same inconsistencies of rationale exist for pegging SETES’ variable charges to BC Hydro rates.

The Panel agrees with the statements in the EES report as to its concerns with SWCRA’s rationale for only partially pegging rates to SEFC’s rates and notes EES’s statement that “SWCRA was willing to accept the fixed rate used by SEFC despite the differences in technology.”¹⁰²

When taking all of the above issues into consideration, the Panel finds that the evidence does not support a finding that SWCRA’s rates are “no more than necessary for service of the nature and quality provided by the particular utility.” **The Panel therefore denies SWCRA’s proposed rates and rate structure.**

¹⁰⁰ SWCRA Final Argument dated June 12, 2017, p. 12.

¹⁰¹ Ibid., pp. 10-11.

¹⁰² Exhibit C7-16, p. 2.

SRG's rate proposal

The Panel considers SRG's rate proposal preferable to SWCRA's from the standpoint that it attempts to bring SWCRA's forecast earnings and ROE within the standard level for regulated Stream B TES utilities, which provides a basis for assessing just and reasonable rates. However, as stated previously, the Panel is not confident that the forecasts provided by SWCRA in its financial model will be reflective of actual results. Thus, setting the capacity charge based on the costs and other assumptions contained in SWCRA's financial model is not appropriate without greater examination of these forecasts.

The Panel notes SWCRA's argument that SRG's proposed rates would not be just and reasonable or equitable because the proposed rates would significantly prolong the period of time over which SWCRA is expected not to recover its costs and earn a reasonable return. Further, like SWCRA, we observe that SRG does not propose a regulatory accounting mechanism to smooth out rates and returns over the period.

The type of rate-setting mechanism SWCRA describes, as the Panel understands it, is a levelized rate structure, which is commonly used by Stream B TES utilities due to the fact that in the early years of the project the load is not sufficient to recover the utility's costs due to the gradual build-out of the system. While this type of rate structure was not proposed by SWCRA, the Panel notes the following benefits of a levelized rate structure: it is a cost-based approach to setting rates, which means that the rates are reflective of the utilities costs over the life of the project, yet it requires less regulatory process and oversight than a cost of service based approach since rates are designed to escalate by a set percentage over the life of the project. Such an approach reduces the regulatory burden compared to cost of service rate-setting because utilities do not need to frequently apply for rate changes (and in fact the utility may not need to request any rate changes during the life of the project if the forecasts and assumptions used to develop the levelized rate are reasonably reflective of the actual results).

The Panel finds that the most appropriate method for setting rates for the SETES is a levelized rate approach. As SWCRA has stated in this proceeding, its earnings are very low (and potentially even negative) in the early years of the development, even under its proposed rates. The Panel has previously noted that this is due to the fact that the SETES will not be fully built out until around 2020 which results in the load being insufficient to recover SWCRA's costs and to earn a reasonable return on investment. By utilizing a levelized rate structure, SWCRA will be able to set initial rates at a more reasonable amount for ratepayers and, by utilizing a deferral account for the under-recovery of its costs, it will be able to recover the shortfalls in future years. **Accordingly, the Panel directs SWCRA to file an application to set rates under a levelized rate structure by no later than June 30, 2019 so that levelized rates may be implemented effective January 1, 2020.**

The Panel expects that with the lengthy time provided until SWCRA is required to file the levelized rate application, SWCRA will be able to design a levelized rate structure which is similar in approach to other Stream B TES utilities. Additionally, the Panel expects that any major variances between forecast and actual load and costs will be taken into consideration when creating future cost and load forecasts in the next application.

Until such time as SWCRA files a new levelized rate application, the Panel finds that pegging the SETES rates to a single utility is the most appropriate approach. Of the utilities examined in evidence, the Panel finds the SEFC NEU to be the most reasonable proxy. As SWCRA explained, it selected the SEFC's monthly levy because "like SETES, SEFC must similarly maintain the thermal capacity of a plant that consists of electric heat pumps and gas fired boilers and the associated distribution system."¹⁰³ BC Hydro, on the other hand, is a vastly different utility to the SETES.

The Panel acknowledges the differences described by SWCRA between the SETES and SEFC which led SWCRA to select BC Hydro instead of SEFC for variable charge pegging. However, there are virtually no similarities between the SETES and BC Hydro other than the fact that electricity is one of SWCRA's variable costs (along with natural

¹⁰³ SWCRA Final Argument dated June 12, 2017, p. 12.

gas). Further, SWCRA is not proposing to flow through the cost of electricity, it is proposing to peg its variable charge to the BC Hydro residential rate, which was designed for a system which bears few similarities to the SETES.

By pegging the SETES rates to one utility – SEFC NEU – SWCRA’s goal of regulatory efficiency is maintained as well as customer understandability. Pegging rates to only one utility will also be administratively simpler because SWCRA will only have to implement one rate change each year and these rate changes will occur at the same time each year.

Another key consideration for the Panel in making its determination is rate volatility. Under a levelized rate approach, the Panel expects that SWCRA’s rates will be lower initially than what it has proposed in this proceeding due to the fact that a levelized rate is designed to under-recover costs in the early years and over-recover costs in the later years until the revenue deficiency deferral account is eliminated. Thus, in an effort to avoid a large rate decrease at the time of implementing the levelized rate structure, the Panel considers it more appropriate for current rates to be better aligned with the anticipated initial rates which would be set under a levelized rate structure.

The Panel recognizes that under the revised rates approved in this decision SWCRA may not be able to recover its costs and that there is currently no deferral account in place to address this under-recovery. **The Panel therefore approves for SWCRA to establish a deferral account to record any annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at approved rates and the annual cost of service (including an allowed ROE based on the current benchmark for Stream B TES of 9.5 percent and the current benchmark capital structure of 57.5 percent debt and 42.5 percent common equity, which may be amended by the Commission from time to time). SWCRA must report on the balance in this deferral account as part of the future levelized rate application and request approval to recover any balance in this deferral account at that time. SWCRA must include in the levelized rate application the details of the annual revenue deficiency or surplus, including the detailed calculations of the annual revenue and a line-by-line breakdown of the annual costs incurred. SWCRA must also compare the annual revenue and costs to the forecast amounts provided in the confidential financial model filed as Appendix E to the Updated Application (Exhibit B-1-1) in this proceeding. The deferral account is approved to accrue carrying charges based on SWCRA’s WACC.**

With respect to the capacity charge, the Panel accepts SWCRA’s argument to charge a universal monthly capacity levy to all customers due to the integrated nature of the thermal energy system. Residential rental apartment customers derive benefit from the space cooling equipment even though they are not provided space cooling services.

Also, the Panel observes that SEFC’s Fixed Capacity Levy is expressed in dollars per square meter per month, whereas the SETES’s Monthly Capacity Levy is in dollars per square foot per month. Aside from the decimal error, the Panel notes that the conversion formula provided by SWCRA in its Updated Application appears complex. In the Panel’s view, a simpler conversion formula can achieve the desired conversion. Since 1 m² is equal to 10.7639 sqft, one can divide a rate in \$/m² by 10.7639 to obtain a rate in \$/sqft:

$$\frac{\frac{\$0.526}{m^2}}{10.7639sqft} = \frac{\$0.526}{m^2} \times \frac{m^2}{10.7639sqft} = \$0.0489/sqft$$

The Panel therefore directs SWCRA to add the conversion formula as a note to Subsection C1 of the Rate Schedule to facilitate ease of bill understanding for customers.

The Panel approves the monthly metering charge of \$9.50 per account. The Panel acknowledges the evidence provided by SWCRA to support this monthly charge and notes that the SETES is unique amongst the thermal energy systems the Commission regulates in that SWCRA offers separate metering for each of the thermal energy services billed to the building/premises. The Panel recognizes that offering separate metering involves multiple meters for each account for which a number of activities must be performed, including: recording the meters, verifying digital equipment addresses to physical addresses and customers, verifying data validity and substituting appropriate estimations of energy consumption when necessary, and maintaining the automated retrieval and summary system.

However, the Panel considers the monthly meter charge to be a significant addition to the customers' monthly bills and is concerned that the activities described by SWCRA may not require the level of time, and therefore cost, as has been estimated in this proceeding. **Accordingly, the Panel directs SWCRA to report on the actual hours spent for metering activities on a monthly and annual basis as part of the next rate application.**

In summary, the Panel:

- 1) Approves SWCRA's proposal to peg the SETES Monthly Capacity Levy to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Fixed Capacity Levy with rate increases pegged to the percentage change in the SEFC Fixed Capacity Levy for Class 1.**
- 2) Directs SWCRA to peg the SETES consumption dependent charges (space heating, domestic water heating and space cooling charge) to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Variable Energy Use Charge, with rate increases pegged to the percentage change in the SEFC Variable Energy Use Charge for Class 1.**
- 3) Directs SWCRA to file an application to set rates under a levelized rate structure by no later than June 30, 2019 so that levelized rates may be implemented effective January 1, 2020.**
- 4) Approves for SWCRA to establish a deferral account to record annual revenue deficiencies or surpluses and to accrue carrying charges on this deferral account based on SWCRA's WACC.**
- 5) Approves the monthly metering charge of \$9.50 per account.**
- 6) Directs SWCRA to report on the actual hours spent for metering activities on a monthly and annual basis as part of the levelized rate application due no later than June 30, 2019.**

The SETES rates described above are approved on a permanent basis, effective the date of this Decision, until December 31, 2019. As stated previously, SWCRA must file a new levelized rate application with the Commission by no later than June 30, 2019.

SWCRA is directed to submit a compliance filing to the Commission, no later than January 31, 2018, which provides revised rates and rate schedules based on the approved rates. As part of the compliance filing, SWCRA must provide the supporting SEFC rate schedules to ensure that the SWCRA rates are based on the most recent SEFC rates.

In the compliance filing, SWCRA must also calculate the difference between interim and permanent rates and come forth with a proposal for refunding the difference to customers, as further discussed in Section 5.2.

In the tables below, the Panel compares the rate proposals of SWCRA and SRG (under its Low case, which generally uses SWCRA's inputs) to the Panel's approved rates, for customers occupying different size units and consuming specific amounts of thermal energy. The Panel notes that the rates are for 2016, and therefore do not take into account BC Hydro's and SEFC's rate increases for the year 2017.

The revised rates based on the Panel's determinations yield annual bill amounts which are similar to SRG's proposal under its Low case.

Table 3: Sample Annual Bill under SWCRA's proposed rates

	775 Sqft Unit		1,300 Sqft Unit		2,000 Sqft Unit	
Charge	# of Units	Annual Cost	# of Units	Annual Cost	# of Units	Annual Cost
Space Cooling \$0.0518 per kWh	350 kWh	\$18.13	750 kWh	\$38.85	850 kWh	\$44.03
Space Heating \$0.1036 per kWh	3,750 kWh	\$388.50	7,900 kWh	\$818.44	12,000 kWh	\$1,243.20
Domestic Hot Water \$0.1036 per kWh	1,000 kWh	\$103.60	2,150 kWh	\$222.74	3,850 kWh	\$398.86
Capacity Charge \$0.0489 per sqft per month	775 sqft	\$454.77	1,300 sqft	\$762.84	2,000 sqft	\$1,173.60
Metering Charge \$9.50 per Month	N/A	\$114.00	N/A	\$114.00	N/A	\$114.00
Total	\$1,079.00		\$1,956.87		\$2,973.69	

Table 4: Sample Annual Bill under SRG's Proposal (Low case)

	775 Sqft Unit		1,300 Sqft Unit		2,000 Sqft Unit	
Charge	# of Units	Annual Cost	# of Units	Annual Cost	# of Units	Annual Cost
Space Cooling \$0.0429 per kWh	350 kWh	\$15.02	750 kWh	\$32.18	850 kWh	\$36.47
Space Heating \$0.0858 per kWh	3,750 kWh	\$321.75	7,900 kWh	\$677.82	12,000 kWh	\$1,029.60
Domestic Hot Water \$0.0858 per kWh	1,000 kWh	\$85.80	2,150 kWh	\$184.47	3,850 kWh	\$330.33
Capacity Charge \$0.0263 per sqft per month	775 sqft	\$244.59	1,300 sqft	\$410.28	2,000 sqft	\$631.20
Metering Charge \$9.50 per Month	N/A	\$114.00	N/A	\$114.00	N/A	\$114.00
Total	\$781.16		\$1,418.75		\$2,141.60	
% Reduction from SWCRA's proposed rates	27.60%		27.50%		28.00%	

Table 5: Sample Annual Bill under Commission approved rates (based on 2016 SEFC rates)

	775 Sqft Unit		1,300 Sqft Unit		2,000 Sqft Unit	
Charge	# of Units	Annual Cost	# of Units	Annual Cost	# of Units	Annual Cost
Space Cooling \$0.0454 per kWh	350 kWh	\$15.89	750 kWh	\$34.05	850 kWh	\$38.59
Space Heating \$0.0454 per kWh	3,750 kWh	\$170.25	7,900 kWh	\$358.66	12,000 kWh	\$544.80
Domestic Hot Water \$0.0454 per kWh	1,000 kWh	\$45.40	2,150 kWh	\$97.61	3,850 kWh	\$174.79
Capacity Charge \$0.0489 per sqft per month	775 sqft	\$454.77	1,300 sqft	\$762.84	2,000 sqft	\$1,173.60
Metering Charge \$9.50 per Month	N/A	\$114.00	N/A	\$114.00	N/A	\$114.00
Total	\$800.31		\$1,367.16		\$2,045.78	
% Reduction from SWCRA's proposed rates	25.83%		30.14%		31.20%	

3.0 PROPOSED RATE RIDERS AND DEFERRAL ACCOUNTS

SWCRA requests approval of three deferral accounts and associated rate riders in its Updated Application.

3.1 Sustainment capital and emergency repair deferral accounts

SWCRA proposes a Sustainment Capital Deferral Account (SCDA) and rate rider, to be activated should capital replacement costs exceed budgeted replacement figures for the year by 30 percent as shown under the “Capital Replacement Cost” line in the SETES rates financial model under line item “Contingency Deposit.”¹⁰⁴

SWCRA proposes an Emergency Repair Deferral Account (ERDA) and rate rider, to be activated in a manner in accordance with SWCRA’s response to BCUC IR 77.2, which states as follows:¹⁰⁵

The Utility is seeking approval for a rate rider and deferral account for emergency repairs to recover the costs of overcoming events which are unsafe, disrupt service, will unreasonably reduce reliability, or will cause non-negligible damage to additional equipment and therefore ultimately greatly increase the cost of maintaining the utility...

...SWCRA is requesting that it attribute costs to the ER account and collect only after the emergency repair costs for a year begin to exceed 30% above the budgeted emergency repair costs.

Example calculation provided for clarity:

Emergency repair budget for utility is \$26,000 / year at utility’s inception.

Qualification to add costs into the deferral account is $1.30 \cdot \$26,000 = \$33,800$ of emergency repair costs actually incurred. The difference is \$7,800.

¹⁰⁴ SWCRA Final Argument dated June 12, 2017, p. 10.

¹⁰⁵ Ibid.

For the purpose of an order of magnitude comparison and without further adjustment of the emergency repair budget for inflation, the ratio of the emergency repair budget to forecast Earnings After Carrying Costs & Taxes (using the financial model submitted with Exhibit B-1-1, not the updated one):

$$\text{Year 2019} - \frac{33,800}{36,984} = 91.39\% \text{ (Losses forecast for prior years)}$$

$$\text{Year 2020} - \frac{33,800}{247,474} = 13.66\%$$

$$\text{Year 2024} - \frac{33,800}{268,049} = 12.61\%$$

Without the deferral account and rate rider, the Utility will receive a marked reduction in earnings for emergency events which are out of its control but which costs are prudently incurred to address.¹⁰⁶

SWCRA further describes the SCDA and ERDA rate riders in Subsection C5 of the Rate Schedule:¹⁰⁷

SHANNON ESTATES THERMAL ENERGY SYSTEMS		
Schedule of Rates		
Service	[Unit]	[Cost/Unit]
Sustainment Capital Account Rate Rider	Percentage of total bill	2.5 percent up to 15 percent subject to limits in Note G.
Emergency Repair Account Rate Rider	Percentage of total bill	2.5 percent up to 15 percent subject to limits in Note G.

Note G: The aggregate limit of the Sustainment Capital Account Rate Rider and the Emergency Repair Account Rate Rider is \$20 per month, \$200 for preceding 12 months, and \$500 for preceding 36 months; per metered unit.

Note H: Each of the Sustainment Capital Account Rate Rider, the Emergency Repair Account Rate Rider and the Regulatory Deferral Account Rate Rider will be applied to bills in the months following the month in which the Utility records expenses in the applicable account, and the applicable rate rider(s) will continue to be charged until the account balance has been paid in full.

Commission determination

The Panel approves the establishment of the SCDA and ERDA until December 31, 2019 based on the following methodology:

- The SCDA and ERDA will be activated if capital replacement costs or emergency repair costs exceed budgeted figures for the year by 30 percent. Only costs exceeding the 30 percent threshold will be recorded in either deferral accounts.

¹⁰⁶ Exhibit B-20, BCUC IR 77.2.

¹⁰⁷ Ibid., Appendix A2.

The Panel does not approve the SCDA and ERDA rate riders at this time. Further clarification by SWCRA is required to understand the mechanics of the rate riders and to understand the overall impacts of the rate riders on customer rates. **Accordingly, if the SCDA or ERDA are activated pursuant to the methodology approved above, the Panel directs SWCRA to apply to the Commission for approval of the rate riders and to include a proposal detailing the following:**

- **The proposed method/criteria to determine the actual percentage for the rate rider, having regard for the time period over which the deferral account balance is recovered and the potential for rate shock;¹⁰⁸**
- **Whether the same rate rider (in percentage) would be applied to all Customers; and**
- **Whether SWCRA agrees to implement the rate rider at the same time as rate increases for the fixed/variable components of the rate, so that customers are not faced with possible rate increases multiple times during the year due to general rate increases and the introduction of the SCDA or ERDA rate rider.**

The Panel denies the aggregate limit of the SCDA and ERDA rate riders, described in Note G of Subsection C5 of the Rate Schedule.

The Panel identifies a number of issues arising from the interaction of the SCDA and ERDA rate riders and the aggregate limit, which are illustrated in the table below. For illustrative purposes, the calculations assume a rate rider at 5 percent for each deferral account and monthly bills range from \$80 to \$300 per month to capture a wide range of scenarios, including the examples provided in recitals E and F of Order G-77-16A.¹⁰⁹

SCDARR	5.00%	of total bill				
ERDARR	5.00%	of total bill				

Bill (\$/mo) (A)	SCDARR (\$/mo) (B)	EMDARR (\$/mo) (C)	Sum (\$/mo) (B+C)	Aggregate Limit (20\$/mo) (D)	Effective rate (%) (D/A)
80.00	4.00	4.00	8.00	8.00	10.00%
90.00	4.50	4.50	9.00	9.00	10.00%
100.00	5.00	5.00	10.00	10.00	10.00%
110.00	5.50	5.50	11.00	11.00	10.00%
120.00	6.00	6.00	12.00	12.00	10.00%
130.00	6.50	6.50	13.00	13.00	10.00%
140.00	7.00	7.00	14.00	14.00	10.00%
150.00	7.50	7.50	15.00	15.00	10.00%
160.00	8.00	8.00	16.00	16.00	10.00%
170.00	8.50	8.50	17.00	17.00	10.00%
180.00	9.00	9.00	18.00	18.00	10.00%
190.00	9.50	9.50	19.00	19.00	10.00%
200.00	10.00	10.00	20.00	20.00	10.00%
210.00	10.50	10.50	21.00	20.00	9.52%
220.00	11.00	11.00	22.00	20.00	9.09%
230.00	11.50	11.50	23.00	20.00	8.70%
240.00	12.00	12.00	24.00	20.00	8.33%
250.00	12.50	12.50	25.00	20.00	8.00%
260.00	13.00	13.00	26.00	20.00	7.69%
270.00	13.50	13.50	27.00	20.00	7.41%
280.00	14.00	14.00	28.00	20.00	7.14%
290.00	14.50	14.50	29.00	20.00	6.90%
300.00	15.00	15.00	30.00	20.00	6.67%

¹⁰⁸ Annual rate changes greater than 10 percent are generally considered rate shock.

¹⁰⁹ Order G-77-16A, Recital E.

First, the table shows the regressive nature of the aggregate limit as lower volume customers with lower monthly bills face a higher effective rate than higher volume customers with higher monthly bills (see “Effective Rate” column). Even though SWCRA may intend to apply the SCDA and ERDA rate riders uniformly to all customers (e.g., 5 percent each in the example above), the higher volume customers hit the \$20 monthly limit more quickly than lower volume customers. In the above example, this occurs for monthly bills above \$200. A similar scenario would occur for the 12-month and 36-month aggregate limits. The higher the sum of the two rate riders, in percentage, the more regressive the aggregate limit, and vice versa. The Panel finds this aspect of the rate unfair. The Panel also notes that the Rental Apartment, Strata Buildings¹¹⁰ and two commercial customers are likely to be among the heavy users with higher bills; yet, their relative contribution to pay down the SCDA and ERDA would be smaller than that of lower volume customers due to the aggregate limit.

Second, when the combined rate rider percentage exceeds 10 percent of the bill, the potential for rate shock exists. This is particularly the case for lower volume customers because the “effective rate” of the combined rate rider percentage decreases with higher bills (due to the aggregate limit), thus reducing the risk of rate shock for higher volume customers.

Third, if the Commission approved the implementation of rate riders at 5 percent to recover the balance in the SCDA and ERDA (as in the example above), but customers with monthly bills higher than \$200 are capped at \$20/month, the utility would not be able to recover the amount it is seeking to recover because some customers would be reaching the aggregate limit. Thus, the Panel finds that the aggregate limit undermines the rate rider mechanisms, which further highlights the unfairness of this aspect of the rate as the recovery of the SCDA and ERDA balances disproportionately burdens lower volume customers.

Finally, the Panel is unclear what would happen if most/all customers have reached any of their limits (monthly, 12-month or 36-month) and the utility suddenly incurs a large expense in either of the accounts but there is no more room to apply additional rate riders. It is unclear how the utility would recover the additional balance.

The Commission will re-evaluate the SCDA and ERDA and their respective rate riders as part of the levelized rate design and rates application.

3.2 Regulatory deferral account and rate rider

In the Updated Application, SWCRA seeks approval of an RDA and rate rider to capture the following regulatory costs:

- Applicant costs for consultants and accounting/legal fees to apply for Rates Approval;
- Applicant costs to produce explanatory material and hold meetings with customers about the Rates Application;
- Participant Assistance / Cost Award (PACA) to interveners; and
- Direct costs of BCUC as they pertain to the regulatory process.¹¹¹

SWCRA did not seek approval to recover regulatory costs as part of the original application and it stated in response to SRG IR 3.2.9 that if the proceeding had not been extended pursuant to Order G-161-16A, the regulatory costs would have been treated as a reduction to SWCRA’s earnings.¹¹²

¹¹⁰ The Rental Apartment and each of the Strata Buildings will be customers due to the need to provide energy services to the common areas.

¹¹¹ Exhibit B-1-1, p. 7.

¹¹² Exhibit B-17-1, SRG IR 2.9.

SWCRA provides the following estimate and breakdown of regulatory costs:¹¹³

Party	Cost for	Cost
SWCRA	Consultant – Sterling Cooper Consultants Inc. (SCCI) to date	\$164,970
SWCRA	Consultant – SCCI additional budget	\$52,000
SWCRA	Accounting & Legal Services Budget	\$60,000
Dean Thomas Fox / Shannon Ratepayers Group	Expert Witness budget – EES Consulting (Gail Tabone)	\$26,000†
BCUC	Direct Costs to date	\$243.75
BCUC	Estimated additional budget	\$750
Estimated Total		\$303,960
† Funds requested in \$USD, conversion rate estimated at 1.3 \$CAD → 1 \$USD, taxes not included in estimate		

SWCRA provides a more detailed breakdown of its consultant and accounting and legal costs by hour and by hourly rate, including a description of the various activities performed by its consultants and accounting and legal representatives, in response to BCUC IRs 79.1 and 79.2 (Exhibit B-20). SWCRA confirmed that all costs incurred by its consultants and accounting and legal representatives relate exclusively to the rates application.¹¹⁴

SWCRA states that it has “practiced reasonable efforts to limit its own costs in the rates application by its use of its mechanical consultant, SCCI.” SWCRA describes SCCI’s involvement as including “research of relevant regulatory provisions, customer education efforts specifically pertaining to BCUC matters, technical and financial analyses and forecasts, and development and submission of the rates application and associated interaction with BCUC, intervenors, and associated parties.”¹¹⁵

SWCRA proposes that the RDA accrue interest at its weighted average cost of debt and that the balance be amortized over a multi-year period.¹¹⁶

Specifically, SWCRA proposes the following structure for the recovery the RDA:

1. Collect 9.9 percent of the following portions of an invoice:
 - a. Space Heating, Space Cooling, and Domestic Hot Water Heating charges
 - b. Monthly Capacity Charge and Monthly Metering Charge
2. Any other rate riders would exclude the cost of the RDA rate rider in their calculations
3. Be designed to collect the balance of the account within 60-months of the effective date BCUC may provide approval for collection of the rate rider.¹¹⁷

SWCRA submits that the recovery period for the RDA is intended to be long enough to ensure residents of Phase 1 do not fund the entire rate setting process and notes that move-in of Phase 2 residents is expected beginning in Q1 of 2018 and finishing by Q4 of 2019.¹¹⁸

¹¹³ Exhibit B-1-1, p. 8.

¹¹⁴ Exhibit B-20, BCUC IR 79.3.

¹¹⁵ Exhibit B-1-1, p. 8.

¹¹⁶ Ibid.

¹¹⁷ Ibid., p. 9.

¹¹⁸ Ibid.

SWCRA submits that while it is proposing that the rate rider be set at 9.9 percent, it would consider seeking an alteration to the rate rider if the actual balance in the RDA is “materially higher” than estimated.¹¹⁹ SWCRA confirms that the TES Guidelines suggest that a 10 percent rate increase may be considered “rate shock” and that another option for the rate rider is to further increase the amortization period; however, this would ultimately increase the balance in the RDA through additional accrued interest. SWCRA also states that an absolute limit could be placed on the rate rider collected, similar to the other proposed rate riders.¹²⁰

The following table was provided by SWCRA to illustrate the total cost per customer and the cost per square foot of recovering the RDA balance.¹²¹

Unit Area	775 ft ²	1,300 ft ²	2,000 ft ²
Utility Consumption	350 kWh of cooling, 3,750 kWh of heating, 1,000 kWh of domestic hot water	750 kWh of cooling, 7,900 kWh of heating, 2,150 kWh of domestic hot water	50 kWh of cooling, 12,000 kWh of heating, 3,850 kWh of domestic hot water
RDA Rate Rider cost per annum (12 months)	\$96.14	\$174.35	\$264.95
RDA Rate Rider cost for 60 months	\$480.70	\$871.75	\$1,324.75
RDA Rate Rider Cost per ft ² per annum	\$0.124	\$0.134	\$0.132

SWCRA was asked in BCUC IR 78.7 to discuss the advantages and disadvantages of allocating the balance of the RDA to each unit based on square footage as opposed to the proposed method. SWCRA responded that an advantage of the alternative proposal is that customers would be provided with a cost they could more easily budget for because it would only depend on the total connected customer base and have less seasonal variation/personal usage dependence. However, a disadvantage of this alternative proposal is that the heaviest users of the system, in absolute energy consumption, will for a unit of the same size pay the same as the least heavy users of the system.¹²²

SWCRA further stated that the advantage of its proposed method for recovering the RDA is that customers would be apportioned the cost on a combination of their usage and unit size. However, a disadvantage is that there would be seasonal variation and personal usages could affect the absolute dollar amount of the RDA and accordingly could cause increased fluctuations from invoice to invoice. Another disadvantage is that customers are allocated more costs on the basis of their actions rather than on the basis of them being individuals.¹²³

EES in its report stated that since SWCRA does not expect to have regulatory costs on an ongoing basis, these costs should be treated like other capital costs and collected over the life of the project as opposed to the 60-month recovery period. It further states if the regulatory costs are approved for recovery, they should be collected over a minimum 10-year period and the rate rider should be applied to each customer for the same period. This could be accomplished by delaying the recovery of the regulatory costs until 2020 when the

¹¹⁹ Exhibit B-20, BCUC IR 78.4.

¹²⁰ Ibid., BCUC IR 78.5, 78.5.1.

¹²¹ Ibid., BCUC IR 78.6.

¹²² Ibid., BCUC IR 78.7.

¹²³ Ibid., BCUC IR 78.7.

development is complete or staggering the collection period such that each unit only pays the rider over a 10-year period.¹²⁴

Positions of the parties

SWCRA submits the following:

...the costs of public utilities regulation (including the costs to the utility, ratepayers and the BCUC) can be significant and they are justified by the public benefits of regulation including essential energy services delivered safely and reliably at just and reasonable rates. It is in the public interest for the utility, ratepayer interveners and the BCUC to incur reasonable costs, and there is nothing punitive about a public utility recovering such costs in customer rates.¹²⁵

SWCRA submits that to keep costs low, it relied primarily on the engineering firm Sterling Cooper NDY, as it designed the SETES and is the expert with respect to the operation, costs and services of the SETES. Sterling Cooper NDY also produced the financial model used to project the costs, revenues and returns of the utility. Accounting support was provided, where needed, by WFC accounting staff, and legal counsel was retained relatively late in the proceeding to assist with addressing the BCUC's suggestions to revise the Tariff and to provide support on issues about the application of the UCA and principles of rate regulation.¹²⁶

SWCRA states that this proceeding has involved "disproportionate time and effort relative to the rate base and customer base of the utility." Accordingly, to "mitigate the impact of this irregular and lengthy proceeding on customers, SWCRA proposes that 25% of the actual regulatory costs for this proceeding should be excluded from the costs to be recovered from customers."¹²⁷

With regard to SRG's proposal that the RDA balance should be recovered over a period longer than the proposed 60 months, SWCRA opposes this because it will result in increased financing costs which will need to be recovered from ratepayers, and a long recovery period will result in a larger outstanding deficit remaining on SETES' financial ledger for longer, which will negatively impact the ability of the utility to independently secure low interest loans.¹²⁸

SRG argues that the regulatory costs should be "disallowed or reduced substantially"¹²⁹ and provides the following rationale for disallowing the regulatory costs:

The claim for \$303,960 was part of the revised application submitted in February, 2017. In response to SRG 3.2.6, the applicant/developer said these costs were not included in its CPCN. The CPCN claimed \$397,000 for fees/overhead and other soft costs of \$368,000. In light of the substantial claim for \$765,000 in the CPCN, the bald claim for a further \$303,960, not supported by evidence or an explanation of why such a large amount was overlooked in the CPCN should not be allowed.¹³⁰

In the event that the Commission does not disallow all of the regulatory costs, SRG argues that the costs should be reduced for, among other things, the following reasons:

- SWCRA did not file an application that met the TES Guidelines;

¹²⁴ Exhibit C7-16, pp. 8-9.

¹²⁵ SWCRA Final Argument dated June 12, 2017, p. 21.

¹²⁶ Ibid., p. 22.

¹²⁷ Ibid., p. 23.

¹²⁸ Ibid.

¹²⁹ SRG Final Argument, p. 6.

¹³⁰ Ibid.

- SWCRA’s application and revised application were voluminous, lacked clarity and contained nothing new other than the regulatory account claim, which led to more IRs and other process;
- Sterling Cooper NDY was making its first application of this type and was less efficient, as evidenced by its failure to follow the TES Guidelines and in filing a revised application late in the process; and
- SWCRA was ordered to give notice of the application to owners of the units. It chose to give notice only to owners whose purchases had closed at the time of giving notice and not make full disclosure to the Commission. This resulted in the re-opening of the evidentiary record and further regulatory process.¹³¹

SRG further argues that if the regulatory costs are allowed, they should be recovered over a minimum ten year period and the rate rider should be applied to each customer over the same period. With regard to SWCRA’s argument that a longer recovery period would negatively impact the ability of the utility to independently secure low interest loans, SRG submits: “Wall Financial Corp. owns the utility and will be able to secure low interest loans.”¹³²

Mr. Peden expresses concern over the large amount of regulatory costs and opposes the recovery of these costs from ratepayers, stating that “[s]ince the Condo Ratepayers have now intervened and hired a consultant and a lawyer and Wall Financial has retained their lawyers and their continuous consultants, the costs have escalated dramatically...”¹³³

Mr. Duffy questions why SWCRA has proposed a 25 percent reduction in the actual regulatory costs for the proceeding and not a reduction of 50 percent or more. Mr. Duffy further asserts that the only regulatory costs which should be considered are costs arising after the filing of the Updated Application on February 6, 2017, as any regulatory work performed prior to that was “related to the initial application and the inadequate process to engage the eventual ratepayers.”¹³⁴ Mr. Duffy points to an amount of \$134 thousand which SWCRA stated was spent prior to 2017 and to a future expense of \$52 thousand for customer presentations as being costs which should not be allowed for recovery. Mr. Duffy states that “no such presentations have taken place.”¹³⁵ Mr. Duffy further argues that there should be no recovery of the RDA balance until the project is complete and occupied by the unit owner/residents in order to ensure that all residents will “carry a fair and equitable share of the RDA expenses.”¹³⁶

SWCRA replies that, as it stated in response to SRG IR 3.2.6 (Exhibit B-17-1), costs related to the current rates application were not included in the estimated project costs of \$7.5 million reported during the CPCN proceeding; therefore, regulatory costs have not been “double counted.” Further, the \$765 thousand identified in the CPCN application as “Fees/Overhead and Other ‘soft’ costs” are related to the following:

- Construction Management Fees;
- Overhead;
- Building Permit Fees;
- Other ‘soft’ costs – Insurance – Workers compensation;
- Other ‘soft’ costs – Insurance – Builders Risk; and
- Other ‘soft’ costs – Contingencies.¹³⁷

¹³¹ Ibid., p. 6.

¹³² Ibid., p. 7.

¹³³ Mr. Peden Final Argument, pp. 1-2.

¹³⁴ Mr. Duffy Final Argument, p. 3.

¹³⁵ Ibid.

¹³⁶ Ibid.

¹³⁷ SWCRA Reply Argument dated July 12, 2017, p. 9.

SWCRA states that it was not an oversight to exclude regulatory costs for the current rates proceeding from the CPCN application, as a CPCN application is expected to include regulatory costs related to the development of the project, not the costs for future regulatory proceedings to set rates. Such costs are not project costs and accordingly are not included in a CPCN application.¹³⁸

Commission determination

The Panel agrees with SWCRA's statement that this proceeding has involved "disproportionate time and effort relative to the rate base and customer base of the utility." The evidentiary record for this proceeding has been re-opened numerous times, revisions to the application and IRs have been filed, issues over access to confidential information and redactions to confidential information have been dealt with, and, most significantly, the proceeding was effectively re-started due to SWCRA's failure to give adequate notice to affected parties.

The Panel recognizes that this is the first rate application filed by SWCRA with the Commission and that it has attempted to minimize regulatory costs by relying primarily on the engineering firm Sterling Cooper NDY; however, it is clear that many of the issues which arose earlier in the proceeding stemmed from a lack of understanding of the rate-setting and regulatory process and that many of these issues may have been more effectively and efficiently resolved had SWCRA retained counsel with experience in regulation sooner.

The Panel considers a robust regulatory process and active participation by parties to be important components in public proceedings and we agree that it is generally reasonable for costs incurred by the applicant, interveners and the BCUC to be recovered from ratepayers. The Panel also acknowledges SWCRA's proposal in its final argument to exclude 25 percent of the actual regulatory costs incurred for this proceeding from recovery from ratepayers. Given the issues described previously which have extended and exacerbated the overall length and cost of this proceeding, the Panel finds SWCRA's proposal to exclude 25 percent of the actual regulatory costs to be reasonable.

Accordingly, the Panel approves for SWCRA to record 75 percent of the actual regulatory costs incurred for the rates application proceeding in the RDA and approves a weighted average cost of debt interest amount be accrued on the balance in the RDA. The Panel finds a WACD interest to be appropriate given the nature of the costs being recorded in the RDA and the fact that the balance in the RDA will be recovered over multiple years.

The Panel understands the interveners' concerns regarding a shorter recovery period and the concerns that more of the costs will be recovered from Phase 1 customers than from Phase 2 customers. The Panel also considers SWCRA's arguments that a lengthier recovery period will result in higher costs for all ratepayers due to the accrual of additional carrying charges and that a longer recovery period may negatively impact the ability of the utility to independently secure low interest loans.

With regard to the rate rider, the Panel finds SWCRA's proposed method for recovery to be overly complicated and considers that recovery of the RDA based on square footage may be more appropriate, as ratepayers will more easily be able to budget for this cost and there will not be seasonal variations in the rate rider based on personal usage in a given month. However, given the Panel's previous directive for SWCRA to file a levelized rate application by June 30, 2019, and the concerns raised by the interveners that more of the regulatory costs may be recovered from Phase 1 ratepayers than from Phase 2 ratepayers, **the Panel does not approve a recovery mechanism for the RDA at this time.**

Instead, the Panel directs that SWCRA apply for recovery of the RDA balance as part of the levelized rate application. The Panel directs SWCRA to present alternative recovery methods in the levelized rate application, including recovery based on square footage. SWCRA must also propose a recovery period for the

¹³⁸ Ibid., p. 10.

RDA as part of the application. The Panel expects that recovery of the RDA would commence as of January 1, 2020.

4.0 SETES Tariff

In its Final Argument, SWCRA states that the original Application requested approval of a SWCRA Thermal Energy Tariff and that through BCUC IRs, including IR No. 3, several questions were asked about the proposed tariff and various amendments were recommended. Thus, SWCRA significantly revised the tariff, in part to address the Commission's recommendations, and submitted the Revised Tariff as Appendix A2 to Exhibit B-20. SWCRA submits that the Revised Tariff is appropriate for the nature of the services SETES provides and the nature of the customers (being individually metered residences, commercial spaces, and rental and strata building common areas).¹³⁹

A number of items in the Revised Tariff require further amendment and/or clarification. These items are discussed in the following sections.

4.1 SETES Tariff Section B – Terms and Conditions

4.1.1 Article 1 – Application for Energy Services

Article 1 (paragraph 1) reads as follows:

The Utility serves Customers solely in accordance with the Thermal Energy Tariff, including the Terms and Conditions, Rate Schedule and Standard Fees and Charges Schedule. Individuals, persons or other entities seeking to become Customers and purchase Thermal Energy shall apply for Energy Services.

Commission determination

Since "Person" is a defined term under the SETES Tariff and encompasses the terms "individual or other entity," **the Panel directs SWCRA to make the following simplification to the first paragraph of Article 1, Section B of the SETES Tariff:**

The Utility serves Customers solely in accordance with the Thermal Energy Tariff, including the Terms and Conditions, Rate Schedule and Standard Fees and Charges Schedule. ~~Individuals, persons or other entities~~ seeking to become Customers and purchase Thermal Energy shall apply for Energy Services.

Article 1 (paragraph 4) reads as follows:

The Utility may refuse to provide Energy Services to an applicant if there is an unpaid account for Energy Services in respect of such applicant or the relevant Building(s).

"Building" is defined as:

Building: means a residential or other building, or a separate unit of a building, including a Strata Lot, Strata Common Property, and commercial or residential rental unit, receiving Energy Services.

The Panel is concerned that, if a previous strata unit owner or apartment unit renter has an unpaid account for the relevant Building, a new owner/renter could be refused service by the utility until that account is paid. The Panel is also concerned that the new owner/renter would be liable for the unpaid account. **Therefore, the Panel**

¹³⁹ SWCRA Final Argument dated June 12, 2017, p. 23.

directs SWCRA to clarify this situation and propose new wording in the SETES Tariff that would not prevent a new owner/renter from receiving Energy Services if the previous owner/renter left without paying the full amount owing. SWCRA is directed to file this revised wording as part of its compliance filing due by January 31, 2018.

4.1.2 Article 7 – Meter Reading

Article 7 (Paragraph 1) reads:

The amount of Thermal Energy registered by the Meter during each billing period will be converted to kilowatt-hours and rounded to the nearest one-half of a kilowatt-hour. [Emphasis added]

Commission determination

Given that the amount of thermal energy is converted to kWh, the Panel is uncertain of the Meter's unit of measurement. Thus, **we direct SWCRA to clarify the Meter's measurement unit as well as the conversion used, and to revise the clause as required as part of the compliance filing due by January 31, 2018.**

4.1.3 Article 11 – Energy Services Reconnections

Article 11 reads as follows:

If:

- (a) Energy Services are discontinued to a Customer for any of the reasons specified in Subsection 16; or
- (b) a Building System is disconnected from the Thermal Energy System or Energy Services are discontinued to a Customer:
 - (i) at the request of the Customer with the approval of the Utility; or
 - (ii) to permit a test of a Meter at the request of the Customer, which Meter is subsequently determined by the Utility to be accurate;

and such Customer or the employee, agent or other representative of such Customer re-applies for Energy Services for the same Building within 12 months of such discontinuance or disconnection (as applicable), then if the Building's Building System is reconnected to the Thermal Energy System or if Energy Services are restored to such Customer, such Customer will pay, as part of fees owing for the first month of Energy Services, a reconnection charge equal to the sum of:

- (c) the Service Restart Charge as defined in the Standard Fees and Charges Schedule; and
- (d) the Basic Charges that such Customer would have paid had Energy Services continued during the period between the date of discontinuance or disconnection (as applicable) and the date of such reapplication.

If a Building System is disconnected from the Thermal Energy System or Energy Services are discontinued to a Customer for public safety or Utility service requirement reasons or the reasons set forth in Subsection 21 Curtailment of Energy Services, there will be no reconnection charge to reconnect the Building's Building System to the Thermal Energy System or to restore Energy Services to such Customer.

If a Building System is disconnected from the Thermal Energy System and a new Customer applies for Energy Services for that Building, then such Customer will pay, as part of fees owing for the first month of Energy Services, a reconnection charge equal to the Service Restart Charge, as set out in the Standard Fees and Charges Schedule. [Emphasis added]

In response to BCUC IR 59.3 which asked, in reconnection instances, why the Utility would need to recover the meter reading portion of the Basic Charge if the Customer was disconnected, and therefore not billed, SWCRA noted that this article applies when reconnection for services occur within 12 months of having been discontinued. SWCRA explained that the fixed costs of the energy system, meters, and meter monitoring are incurred for the benefit of all customers whether or not an individual customer is taking energy at a particular time. SWCRA further submitted the following:

The referenced provision ensures that the Customer will be billed for their share of fixed costs, and it is also a disincentive for Customers to temporarily discontinue service to avoid fixed charges. Despite the occurrence of a disconnect, the Utility continues to monitor the meter for usage which could be either an indication of equipment failure, such as a leak which requires prompt rectification to limit damage, or usage in violation of the terms of the disconnect.¹⁴⁰

SWCRA confirmed that the fees set out in this article would apply to a “soft disconnect,” as they are partly intended as a disincentive for Customers to temporarily discontinue service to avoid fixed charges that ought to be recovered from them.¹⁴¹ SWCRA expects that in most cases, a “soft disconnect” will be elevated to a “hard disconnect,” with its associated costs, as quickly as reasonably possible.¹⁴²

Commission determination

The Panel recognizes that the utility continues to incur fixed costs related to meter monitoring even during disconnection and agrees with SWCRA that the reconnection charges can act as a deterrent for customers to request a disconnect of service to avoid paying their costs. Thus, the Panel finds the reconnection charges to be reasonable.

With respect to the last paragraph in Article 11 (underlined above), the Panel notes that SWCRA proposed this new wording as part of its Revised SETES Tariff, filed with BCUC IR No. 3 responses, without explaining the rationale for this revision. The Panel sees two separate issues with this new wording:

- The paragraph immediately above states that there will be no reconnection charge for a Customer in instances where the Building System may have been disconnected from the Thermal Energy System or Energy Services discontinued to a Customer for public safety or Utility service requirement reasons, including curtailment. Therefore, the Panel fails to understand the rationale for why a new Customer would have to pay reconnection charges under such circumstances.
- The Panel does not understand the rationale for why a new owner or renter would have to pay the reconnection fees simply because the previous occupant got disconnected.

Therefore, the Panel finds this clause may result in unfair treatment to new customers compared to existing customers and directs SWCRA to revise this clause to address the Panel’s concerns.

4.1.4 Article 12 – Billing

Article 12(e) states:

The Customer will pay bills in the manner specified in the bill, which may include payment by regular mail, payment at a designated office of the Utility and/or payment by on-line banking or electronic funds transfer.

¹⁴⁰ Exhibit B-20, BCUC IR 59.3.

¹⁴¹ Ibid., BCUC IR 59.5.

¹⁴² Ibid., BCUC IR 59.5.

In response to an interested party's comment, SWCRA stated:

We confirm Customers may currently use any of the following four methods of payment:

1. Pre-authorized debit
2. Mailing a cheque
3. Online using their financial institution's website and selecting "Quadlogic Meters Canada" as the Payee. Their account number must be available, and can be found on their invoice.
4. In person at their financial institution. A copy of their invoice will need to be presented.¹⁴³

Commission determination

The Panel requests SWCRA to clarify whether Customers will be able to pay their bills in person at their financial institution, and if so, SWCRA is directed to revise the wording in Article 12(e), Section B of the SETES Tariff accordingly.

4.1.5 Article 13 – Back-billing

In response to BCUC IR 61 on back-billing, SWCRA proposed revisions to its back-billing clause, with no rationale for this change.¹⁴⁴ The black-line version of the Revised SETES Tariff shows Article 13(h) as follows:

(h) In every case of over-billing, the Utility will refund to the Customer all money incorrectly collected for the duration of the error, subject to the applicable limitation period provided by law. ~~Simple interest, computed at the short-term bank loan rate applicable to the Utility on a monthly basis, will be paid to the Customer.~~

Commission determination

The Panel looked at other TES' Terms and Conditions, which SWCRA filed as evidence in this proceeding. This comparison shows that the Lonsdale Energy Corporation,¹⁴⁵ Sun Peak Utilities Co. Ltd.,¹⁴⁶ FAES' Marine Gateway TES Service Agreement (Residential Strata),¹⁴⁷ Dockside Green Energy,¹⁴⁸ River District Energy¹⁴⁹ and Corix NDES¹⁵⁰ all pay interest in cases of over-billing. Given the other TES' examples and the fact that SWCRA has not explained why it removed this clause, the Panel finds the proposed change unreasonable.

Therefore, the Panel approves the original wording regarding the payment of simple interest in the case of over-billing and directs SWCRA to re-insert the deleted wording regarding simple interest.

4.2 Other SETES Tariff-related issues

Section A – Definitions

The definitions of Customer and Person read as follows:

Customer: means any individual, person, partnership, company or other entity receiving Energy Services from the Utility. If a Customer receives Energy Services at more than one Building, then

¹⁴³ SWCRA Reply Submission dated September 7, 2016, p. 16.

¹⁴⁴ Exhibit B-20, BCUC IR 61 and Appendix A1, black-line version of the SETES Tariff.

¹⁴⁵ Exhibit B-1, p. 152, Section 15.6 of the Corporation of the City of North Vancouver ByLaw No. 7575 at p. 24.

¹⁴⁶ Exhibit B-2, Appendix B1, Section 11.7.

¹⁴⁷ Ibid., Appendix B2, Section 9(c)

¹⁴⁸ Ibid., Appendix B3, Section 16(6).

¹⁴⁹ Ibid., Appendix B4, Section 2.2.3(e).

¹⁵⁰ Exhibit B-5, Appendix, Section 13(f).

the Utility will determine, in its sole discretion, whether such Customer shall be considered as a separate Customer at each of the Buildings or as the same Customer for all of the Buildings.

Person: means an individual or his or her legal personal representative, an unincorporated organization or association, or a corporation, partnership, strata corporation as defined by the BC Strata Property Act, trust, trustee, syndicate, joint venture, limited liability company, union, government agency or other entity or organization.

The Panel notes the term “Person” is a defined term under the SETES Tariff and encompasses the terms “individual,” “partnership,” “company” or “other entity” that are listed in the definition of “Customer.” Therefore, we recommend the following simplification to the definition of “Customer.”

Customer: means any ~~individual, person, partnership, company or other entity~~ receiving Energy Services from the Utility. If a Customer receives Energy Services at more than one Building, then the Utility will determine, in its sole discretion, whether such Customer shall be considered as a separate Customer at each of the Buildings or as the same Customer for all of the Buildings.

Section B – Terms and Conditions

The Panel notes that the sub-numbering is incorrect in various Articles and directs SWCRA to make the following corrections:

- **Article 11: (c) and (d) should be changed to (i) and (ii) as the two items listed constitutes a new list;**
- **Article 12(d): the sub-numbering should start at (i) rather than (iii);**
- **Article 13(a): roman numeral (iii) is repeated twice, which means subsequent sub-numbers also need to be corrected.**

The Panel also recommends the following revisions:

- Article 3: removing the phrase “from time to time in effect.” The Panel notes that revised wording for this clause was proposed through BCUC IRs, which included removal of the words “from time to time in effect”. SWCRA confirmed its agreement with the proposed changes in its IR responses, but omitted to remove the phrase from Article 3.¹⁵¹
- Article 21(1) refers to “class or classes of Customers” while SWCRA proposes only one class of customers. Article 21(2) reads: “Any such requirement may be communicated to any Customer or Customers or to all Customers...” There is no need to refer to class or classes of customers.

Section C – Rate Schedule

In Subsection C1, SWCRA proposes a “Monthly metering charge of \$9.50 per Unit.” The Panel notes that the term “Unit” is not a defined term under the SETES Tariff. We believe SWCRA’s intention is to apply the monthly metering charge per Building, as this term is defined in the SETES Tariff;¹⁵² however, given that a Building can have multiple meters, **the Panel finds the use of “Unit” confusing and directs SWCRA to either define it in a compliance filing or use a term already defined.**

Subsection C5 – Rate Riders does not mention that the Sustainment Capital Account or the Emergency Repair Account are deferral accounts (neither in the table nor in Note H). Yet, SWCRA requests approval of the

¹⁵¹ Exhibit B-20, BCUC IR 70.1.

¹⁵² Building: means a residential or other building, or a separate unit of a building, including a Strata Lot, Strata Common Property, and commercial or residential rental unit, receiving Energy Services.

Sustainment Capital Deferral Account and the Emergency Repair Deferral Account.¹⁵³ **The Panel directs SWCRA to correct Subsection C5 accordingly.**

Section D – Standard Fees and Charges Schedule

The Panel directs SWCRA to remove the word “Stop” in the first heading of Section D as SWCRA no longer proposes a Service Stop Charge.¹⁵⁴

Subject to the minor housekeeping change, the Panel approves the standard fees and charges, included in Section D – Standard Fees and Charges Schedule of the Revised SETES Tariff.

Notwithstanding the issues and revisions directed in Sections 4.1 and 4.2 of the Decision, the Panel finds the Revised SETES Tariff reasonable and accordingly approves it effective the date of this Decision. SWCRA is directed to file all revisions to the SETES tariff as part of its compliance filing due to the Commission no later than January 31, 2018.

5.0 Other issues

5.1 Avoided capital costs

The issue of avoided capital costs was raised by Mr. Duffy and SRG in their respective intervener evidence filings.

Mr. Duffy submitted that the developer “avoided” certain costs by not having to install conventional HVAC and hot water systems in the individual units due to the installation of the TES. Mr. Duffy estimates these costs to be between \$7,000 to \$9,500 per residential unit, depending on water tank and heat pump sizes. Mr. Duffy therefore estimates a total avoided capital cost of \$4.95 million (600 units multiplied by \$8,250 per unit) and asserts that the project capital cost recovered from customers should be \$2.55 million instead of \$7.5 million.¹⁵⁵ The EES report re-iterates Mr. Duffy’s submission that there is an estimated \$4.95 million in avoided capital costs that occurred for space, water heating and cooling appliances when building the various rental and condo units. EES submits that traditionally, the cost of space and water heating appliances are included in the purchase price of a home and are not collected outside of the purchase price. However, since sales and rental prices are set through competition within the real estate market and not strictly based on the costs to develop the project, the sales price likely reflects the market value of alternative units that included the cost of space and water heating appliances. Therefore, since the project developer was able to avoid \$4.95 million in costs, they likely collected excess profits when the units were sold, and EES asserts that it is not appropriate for SWCRA to then earn profit through rates on the full \$7.5 million cost of the SETES.¹⁵⁶

Position of the parties

SWCRA submits that Mr. Duffy and SRG’s argument regarding avoided capital costs is “novel” and “is not supported by the UCA or regulatory principles.”¹⁵⁷

SWCRA states that the sales price of a particular strata unit reflects the market value of the specific unit, not of alternative units as suggested by SRG, as determined through competition in the real estate market. Further,

¹⁵³ Exhibit B-1-1, pp. 6-7.

¹⁵⁴ Exhibit B-20, Appendix A1.

¹⁵⁵ Exhibit C4-2, pp. 4-5.

¹⁵⁶ Exhibit C7-16, p. 6.

¹⁵⁷ SWCRA Final Argument dated June 12, 2017, p. 18.

SWCRA argues that SRG has not provided evidence to support its assertion and has only provided calculations based on “hypothetical assumptions.”¹⁵⁸

SWCRA further states the following:

There is no connection in law or accounting between the developer’s avoided capital cost of not installing traditional heating/cooling equipment, and the actual cost of the utility equipment installed to provide thermal energy services whether or not the developer and utility have a common parent. The SRG’s “avoided capital cost” argument would require the BCUC to in effect change the terms of the strata unit sale agreements and rental agreements (e.g., to imply a CIAC [Contribution in Aid of Construction] that does not exist) and/or require SWCRA to write off up to \$4.95 million of brand new used and useful assets that the BCUC has certified in the public convenience and necessity and which will continue to be used to provide thermal services to customers for years to come.¹⁵⁹

SWCRA also argues that SRG’s \$4.95 million calculation does not include any accounting for the following:

- The costs the developer incurred to design and install space heating/cooling and domestic hot water equipment in the buildings and units;
- The costs the developer incurred to install premium energy saving measures for each of the TES types; or
- Other benefits the strata owners receive such as avoidance of maintenance and replacement costs for traditional equipment not installed.¹⁶⁰

SRG argues that the avoided capital cost concept will be applicable to some but not all TES projects, depending on the facts in each case, and in the present case, the applicant was also the developer who avoided capital costs, and this should be taken into consideration by the BCUC when setting rates. SRG re-iterates the submissions made by EES, that the applicant/developer set condominium prices based on competition within the real estate market, not strictly based on the costs to develop the project, that these development costs were lower by an estimated \$4.95 million, and that condominium prices reflected the market value of alternative units whose cost to develop included the cost of space and water heating appliances. Thus, by avoiding these development costs the applicant/developer profited by an additional \$4.95 million.¹⁶¹

SRG raises the principle of “Adverse Inference” in making its argument, stating that because SWCRA has not produced documents or evidence in any other form, which is in its sole control, or offered an explanation for not doing so, the Commission “is asked to draw the adverse inference” that: (i) Wall Financial Corp. avoided capital costs of approximately \$4.95 million; (ii) units were not priced below comparable units with the equipment; and (iii) Wall Financial Corp. profited in the approximate amount of \$4.95 million from the sale of condominiums in excess of profits that it would have derived from the sale of condominiums containing the equipment and not serviced by a TES.¹⁶²

Mr. Duffy revises his argument slightly from his previous submission (Exhibit C4-2) to exclude the rental units from the avoided capital cost amount. Mr. Duffy submits that the developer and beneficial owner of SETES avoided costs by not installing conventional HVAC and hot water systems in each resident owned unit. After removing the rental units from the calculation, Mr. Duffy now estimates the avoided capital cost to be \$3.3 million.¹⁶³

¹⁵⁸ Ibid.

¹⁵⁹ Ibid., p. 19.

¹⁶⁰ SWCRA Final Argument dated June 12, 2017, p. 19.

¹⁶¹ SRG Final Argument, pp. 3-4.

¹⁶² Ibid., p. 5.

¹⁶³ Mr. Duffy Final Argument, pp. 3-4.

SWCRA replies that if the buyers of strata units (and/or the tenants of rental units) provided CIAC for the costs of the SETES, it would be appropriate to subtract such contributions for the purposes of determining a rate base and setting rates; however, it is clear that buyers of strata units did not provide CIAC for the SETES or otherwise pay for its construction pursuant to their strata unit purchase contracts, and neither did renters.¹⁶⁴

With regard to SRG and Mr. Duffy's arguments that the avoided capital cost issue is unique to the situation where the property developer is affiliated to the utility owner, SWCRA responds that the treatment proposed by SRG would not "in any event stem from the developer and the utility having a common parent; the treatment would stem from the strata unit buyers and renters providing CIAC towards the costs of the SETES...which clearly did not occur."¹⁶⁵

SWCRA further argues that SRG's assertions regarding "adverse inference" are not applicable and "should not distract from the fundamental fact that there was no CIAC to the SETES." SWCRA further states: "In the absence of contractual provisions specifying that buyers provided CIAC for the costs of the SETES (which provisions do not exist), there is no connection in law or accounting between the developer's avoided capital cost of not installing traditional heating/cooling equipment, and the actual cost of the utility equipment installed to provide thermal energy services." In SWCRA's view, if the Commission were to accept SRG and Mr. Duffy's avoided capital cost argument, the Commission would be required to direct that strata unit buyers and rental unit tenants have provided CIAC to SETES costs and/or require SWCRA to write off up to \$4.95 million of brand new used and useful assets.¹⁶⁶

Commission determination

The Panel rejects SRG and Mr. Duffy's argument regarding avoided capital costs. The capital cost of the SETES, as approved by the Commission in Order C-4-16, is \$7.5 million. This amount has been approved as the rate base for SETES and therefore is the amount approved to be recovered from SETES ratepayers. Accordingly, the Panel considers SRG and Mr. Duffy's argument regarding avoided capital costs to be out of scope.

5.2 Reporting

5.2.1 Refund/recovery due to differences between interim and permanent rate approvals

Directive 3 of Order G-77-16A states:

Any differences between the interim and permanent rates that are determined by the Commission following final disposition of the Application are subject to refund/recovery, with interest, at the average prime rate of Shannon Wall Centre Rental Apartments Limited Partnership's (SWCRA) principal bank for its most recent year in the manner as set out by a Commission order that established permanent rates.

¹⁶⁴ SWCRA Reply Argument dated July 12, 2017, p. 7.

¹⁶⁵ Ibid., p. 7.

¹⁶⁶ SWCRA Reply Argument dated July 12, 2017, pp. 7-8.

Basic charges and consumption dependent charges

Table 6: Differences between Interim and Final Basic Charges and Consumption Dependent Charges

	Interim Rates Approved (Order G-77-16A)		Final Rates Approved (Order G-190-17)	
	2016	2017	2016	2017
Capacity Levy per sqft	\$0.0489	\$0.0502 (effective January 1, 2017)	\$0.0489	\$0.0502 (effective January 1, 2017)
Metering Charge	\$9.50	\$9.50	\$9.50	\$9.50
Variable Charge – Space Heating per kWh	\$0.1036	\$0.1073 ¹⁶⁷ (effective April 1, 2017)	\$0.0454	\$0.0472 (effective January 1, 2017)
Variable Charge – Domestic Hot Water per kWh	\$0.1036	\$0.1073 (effective April 1, 2017)	\$0.0454	\$0.0472 (effective January 1, 2017)
Variable Charge – Space Cooling per kWh	\$0.0518	\$0.0537 (effective April 1, 2017)	\$0.0454	\$0.0472 (effective January 1, 2017)

As indicated in the above table, the rates of the utilities against which SWCRA had proposed to peg its rates have increased as of January 1, 2017 (SEFC rates) and as of April 1, 2017 (BC Hydro). Thus, pursuant to Order G-77-16A, on January 1, 2017, SWCRA should have increased the capacity levy charged to customers to \$0.0502 per sqft and on April 1, 2017, SWCRA should have increased the variable charges to \$0.1073 per kWh of space heating and DHW and to \$0.0537 per kWh of space cooling. Yet, SWCRA's Final Argument dated June 12, 2017 makes no mention of these rate increases and instead states that the rates were still "currently" those of 2016.¹⁶⁸

Therefore, in order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has increased its capacity levy and consumption dependent charges in 2017 in compliance to Order G-77-16A. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.

Sustainment Capital Fund Rate Rider

By Order G-77-16A, the Commission approved the Sustainment Capital Fund Rate Rider, as applied for in the initial Application. Based on the initial Application, the Sustainment Capital Fund Rate Rider was designed to collect funds to build the Capital Reserve Fund and the Emergency Repair Fund in advance of sustainment capital replacement or emergency repair. SWCRA amended the design of the Sustainment Capital Fund Rate Rider in the Updated Application to collect funds after the expenses have occurred. Earlier in this Decision, the Panel approved the Sustainment Capital Deferral Account and Emergency Repair Deferral Account but did not approve the associated rate riders at this time. **Therefore, in order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has been collecting the Sustainment Capital Fund Rate Rider from ratepayers. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.**

¹⁶⁷ BC Hydro's rates increased by 3.5 per cent on April 1, 2017. The Step 1 increased from 8.29 cents/kWh to 8.58 cents/kWh and the Step 2 rate increased from 12.43 cents/kWh to 12.87 cents/kWh. These rates have been granted interim approval by Commission Order G-39-17.

¹⁶⁸ SWCRA Final Argument dated June 12, 2017, p. 9.

Standard fees and charges

As noted in Section 4.2, the Panel approved SWCRA's Revised Schedule of Standard Fees and Charges. The Revised Schedule of Standard Fees and Charges differs from the initial Schedule of Standard Fees and Charges in two respects:

- SWCRA no longer proposes to charge a Service Stop or Termination Charge of \$125.00; and
- SWCRA removed the provision to pay interest on cash security deposit because it also removed the provision to charge security deposits.

Therefore, in order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has charged any customers a Service Stop or Termination Charge of \$125 and whether it has charged any customers security deposits. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.

5.2.2 Compliance filing

Having identified the differences between the interim and permanent rates approved, the Panel directs SWCRA to provide a compliance filing to the Commission with the following information for each Building (as the term is defined in the SETES Tariff) that has received Energy Services:

- a. The Building's consumption of space heating, space cooling and domestic hot water from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017.
- b. The amount SWCRA actually billed to the Building for each thermal energy service from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017.
- c. The recalculation of the amounts owed by the Building for each thermal energy service, based on the final rates approved pursuant to this Decision, from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017.
- d. A calculation of the amounts owed by SWCRA for each Building (i.e., difference between points b. and c. above) from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017.
- e. Whether SWCRA has collected any amounts from Customers through the Sustainment Capital Fund Rate Rider approved by Order G-77-16A and if so, how much it has collected from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017.
- f. Whether SWCRA has charged a service stop/termination charge to any Customer in respect of any Building during the period June 1, 2016 to December 31, 2017, and if so, at what date.
- g. Whether SWCRA has charged a security deposit to any Customer in respect of any Building, during the period June 1, 2016 to December 31, 2017, and paid interest on such security deposit in accordance with Order G-77-16A. If so, the Panel directs SWCRA to refund the security deposit, less any interest SWCRA may have paid to Customers.
- h. Whether the Customer (as the term is defined in the SETES Tariff) has changed during the period from June 1, 2016 to December 31, 2017 and if so, how is SWCRA planning to refund the monies owed to Customers who have left.

For any amount refunded by the utility, SWCRA must calculate interest, at its principal bank's average prime rate using the 2016 rate for over-billing in 2016 and using the 2017 rate for over-billing in 2017.

SWCRA must submit the compliance filing to the Commission no later than January 31, 2018.

5.2.3 Future rate increases

As previously stated, the approvals granted in this Decision are effective until December 31, 2019. Therefore, **the Panel directs SWCRA to file with the Commission the updated SETES rate schedule with the supporting updated SEFC NEU rate schedule within 10 days of the SEFC NEU implementing any rate increase for the Class 1 Residential and Mixed-Use Residential rate schedules.** The Panel expects that the SETES rates will be increased in 2018 and 2019 in accordance with SEFC NEU rate increases.

6.0 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 Panel therefore denies SWCRA's proposed rates and rate structure.	24
2.	The Panel directs SWCRA to file an application to set rates under a levelized rate structure by no later than June 30, 2019 so that levelized rates may be implemented effective January 1, 2020.	25
3.	The Panel therefore approves for SWCRA to establish a deferral account to record any annual revenue deficiencies or surpluses resulting from the difference between the annual revenue at approved rates and the annual cost of service (including an allowed ROE based on the current benchmark for Stream B TES of 9.5 percent and the current benchmark capital structure of 57.5 percent debt and 42.5 percent common equity, which may be amended by the Commission from time to time). SWCRA must report on the balance in this deferral account as part of the future levelized rate application and request approval to recover any balance in this deferral account at that time. SWCRA must include in the levelized rate application the details of the annual revenue deficiency or surplus, including the detailed calculations of the annual revenue and a line-by-line breakdown of the annual costs incurred. SWCRA must also compare the annual revenue and costs to the forecast amounts provided in the confidential financial model filed as Appendix E to the Updated Application (Exhibit B-1-1) in this proceeding. The deferral account is approved to accrue carrying charges based on SWCRA's WACC.	26
4.	The Panel therefore directs SWCRA to add the conversion formula as a note to Subsection C1 of the Rate Schedule to facilitate ease of bill understanding for customers.	26
5.	The Panel approves the monthly metering charge of \$9.50 per account.	26
6.	The Panel directs SWCRA to report on the actual hours spent for metering activities on a monthly and annual basis as part of the next rate application.	27

	Directive	Page
7.	<p>In summary, the Panel:</p> <ol style="list-style-type: none"> 1) Approves SWCRA's proposal to peg the SETES Monthly Capacity Levy to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Fixed Capacity Levy with rate increases pegged to the percentage change in the SEFC Fixed Capacity Levy for Class 1. 2) Directs SWCRA to peg the SETES consumption dependent charges (space heating, domestic water heating and space cooling charge) to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Variable Energy Use Charge, with rate increases pegged to the percentage change in the SEFC Variable Energy Use Charge for Class 1. 3) Directs SWCRA to file an application to set rates under a levelized rate structure by no later than June 30, 2019 so that levelized rates may be implemented effective January 1, 2020. 4) Approves for SWCRA to establish a deferral account to record annual revenue deficiencies or surpluses and to accrue carrying charges on this deferral account based on SWCRA's WACC. 5) Approves the monthly metering charge of \$9.50 per account. 6) Directs SWCRA to report on the actual hours spent for metering activities on a monthly and annual basis as part of the levelized rate application due no later than June 30, 2019. 	27
8.	The SETES rates described above are approved on a permanent basis, effective the date of this decision, until December 31, 2019. As stated previously, SWCRA must file a new levelized rate application with the Commission by no later than June 30, 2019.	27
9.	SWCRA is directed to submit a compliance filing to the Commission, no later than January 31, 2018, which provides revised rates and rate schedules based on the approved rates. As part of the compliance filing, SWCRA must provide the supporting SEFC rate schedules to ensure that the SWCRA rates are based on the most recent SEFC rates.	27
10.	In the compliance filing, SWCRA must also calculate the difference between interim and permanent rates and come forth with a proposal for refunding the difference to customers, as further discussed in Section 5.2.	27
11.	<p>The Panel approves the establishment of the SCDA and ERDA until December 31, 2019 based on the following methodology:</p> <ul style="list-style-type: none"> • The SCDA and ERDA will be activated if capital replacement costs or emergency repair costs exceed budgeted figures for the year by 30 percent. Only costs exceeding the 30 percent threshold will be recorded in either deferral accounts. 	30
12.	The Panel does not approve the SCDA and ERDA rate riders at this time.	31

	Directive	Page
13.	<p>If the SCDA or ERDA are activated pursuant to the methodology approved above, the Panel directs SWCRA to apply to the Commission for approval of the rate riders and to include a proposal detailing the following:</p> <ul style="list-style-type: none"> • The proposed method/criteria to determine the actual percentage for the rate rider, having regard for the time period over which the deferral account balance is recovered and the potential for rate shock; Whether the same rate rider (in percentage) would be applied to all Customers; and • Whether SWCRA agrees to implement the rate rider at the same time as rate increases for the fixed/variable components of the rate, so that customers are not faced with possible rate increases multiple times during the year due to general rate increases and the introduction of the SCDA or ERDA rate rider. 	31
14.	The Panel denies the aggregate limit of the SCDA and ERDA rate riders, described in Note G of Subsection C5 of the Rate Schedule.	31
15.	The Panel approves for SWCRA to record 75 percent of the actual regulatory costs incurred for the rates application proceeding in the RDA and approves a weighted average cost of debt interest amount be accrued on the balance in the RDA.	37
16.	The Panel does not approve a recovery mechanism for the RDA at this time.	37
17.	The Panel directs that SWCRA apply for recovery of the RDA balance as part of the levelized rate application. The Panel directs SWCRA to present alternative recovery methods in the levelized rate application, including recovery based on square footage. SWCRA must also propose a recovery period for the RDA as part of the application.	37
18.	<p>The Panel directs SWCRA to make the following simplification to the first paragraph of Article 1, Section B of the SETES Tariff:</p> <p>The Utility serves Customers solely in accordance with the Thermal Energy Tariff, including the Terms and Conditions, Rate Schedule and Standard Fees and Charges Schedule. Individuals, persons or other entities seeking to become Customers and purchase Thermal Energy shall apply for Energy Services.</p>	38
19.	The Panel directs SWCRA to clarify this situation and propose new wording in the SETES Tariff that would not prevent a new owner/renter from receiving Energy Services if the previous owner/renter left without paying the full amount owing. SWCRA is directed to file this revised wording as part of its compliance filing due by January 31, 2018.	38-39
20.	We direct SWCRA to clarify the Meter's measurement unit as well as the conversion used, and to revise the clause as required as part of the compliance filing due by January 31, 2018.	39
21.	The Panel finds this clause may result in unfair treatment to new customers compared to existing customers and directs SWCRA to revise this clause to address the Panel's concerns.	40

	Directive	Page
22.	The Panel requests SWCRA to clarify whether Customers will be able to pay their bills in person at their financial institution, and if so, SWCRA is directed to revise the wording in Article 12(e), Section B of the SETES Tariff accordingly.	41
23.	The Panel approves the original wording regarding the payment of simple interest in the case of over-billing and directs SWCRA to re-insert the deleted wording regarding simple interest.	41
24.	The Panel notes that the sub-numbering is incorrect in various Articles and directs SWCRA to make the following corrections: <ul style="list-style-type: none"> Article 11: (c) and (d) should be changed to (i) and (ii) as the two items listed constitutes a new list; Article 12(d): the sub-numbering should start at (i) rather than (iii); Article 13(a): roman numeral (iii) is repeated twice, which means subsequent sub-numbers also need to be corrected. 	42
25.	The Panel finds the use of “Unit” confusing and directs SWCRA to either define it in a compliance filing or use a term already defined.	42
26.	The Panel directs SWCRA to correct Subsection C5 accordingly.	43
27.	The Panel directs SWCRA to remove the word “Stop” in the first heading of Section D as SWCRA no longer proposes a Service Stop Charge.	43
28.	Subject to the minor housekeeping change, the Panel approves the standard fees and charges, included in Section D – Standard Fees and Charges Schedule of the Revised SETES Tariff.	43
29.	Notwithstanding the issues and revisions directed in Sections 4.1 and 4.2 of the Decision, the Panel finds the Revised SETES Tariff reasonable and accordingly approves it effective the date of this Decision. SWCRA is directed to file all revisions to the SETES tariff as part of its compliance filing due to the Commission no later than January 31, 2018.	43
30.	The Panel rejects SRG and Mr. Duffy’s argument regarding avoided capital costs.	45
31.	In order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has increased its capacity levy and consumption dependent charges in 2017 in compliance to Order G-77-16A. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.	46
32.	In order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has been collecting the Sustainment Capital Fund Rate Rider from ratepayers. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.	47
33.	Therefore, in order to determine the amount of refund due to differences between interim and final rates, the Panel directs SWCRA to report to the Commission whether it has charged any customers a Service Stop or Termination Charge of \$125 and whether it has charged any customers security deposits. SWCRA must include this information as part of the compliance filing due no later than January 31, 2018.	47

	Directive	Page
34.	<p>Having identified the differences between the interim and permanent rates approved, the Panel directs SWCRA to provide a compliance filing to the Commission with the following information for each Building (as the term is defined in the SETES Tariff) that has received Energy Services:</p> <ul style="list-style-type: none"> a. The Building's consumption of space heating, space cooling and domestic hot water from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017. b. The amount SWCRA actually billed to the Building for each thermal energy service from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017. c. The recalculation of the amounts owed by the Building for each thermal energy service, based on the final rates approved pursuant to this Decision, from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017. d. A calculation of the amounts owed by SWCRA for each Building (i.e., difference between points b. and c. above) from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017. e. Whether SWCRA has collected any amounts from Customers through the Sustainment Capital Fund Rate Rider approved by Order G-77-16A and if so, how much it has collected from June 1, 2016 to December 31, 2016 and from January 1, 2017 to December 31, 2017. f. Whether SWCRA has charged a service stop/termination charge to any Customer in respect of any Building during the period June 1, 2016 to December 31, 2017, and if so, at what date. g. Whether SWCRA has charged a security deposit to any Customer in respect of any Building, during the period June 1, 2016 to December 31, 2017, and paid interest on such security deposit in accordance with Order G-77-16A. If so, the Panel directs SWCRA to refund the security deposit, less any interest SWCRA may have paid to Customers. h. Whether the Customer (as the term is defined in the SETES Tariff) has changed during the period from June 1, 2016 to December 31, 2017 and if so, how is SWCRA planning to refund the monies owed to Customers who have left. 	47
35.	For any amount refunded by the utility, SWCRA must calculate interest, at its principal bank's average prime rate using the 2016 rate for over-billing in 2016 and using the 2017 rate for over-billing in 2017.	47
36.	SWCRA must submit the compliance filing to the Commission no later than January 31, 2018.	47
37.	the Panel directs SWCRA to file with the Commission the updated SETES rate schedule with the supporting updated SEFC NEU rate schedule within 10 days of the SEFC NEU implementing any rate increase for the Class 1 Residential and Mixed-Use Residential rate schedules	48

DATED at the City of Vancouver, in the Province of British Columbia, this 19th day of December 2017.

Original signed by:

R. D. Revel
Panel Chair / Commissioner

Original signed by:

D. M. Morton
Commissioner



ORDER NUMBER
G-190-17

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

Shannon Wall Centre Rental Apartments Limited Partnership
Rate Application for the Shannon Estates Thermal Energy System

BEFORE:

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

on December 19, 2017

ORDER

WHEREAS:

- A. On May 24, 2016, Shannon Wall Centre Rental Apartments Limited Partnership (SWCRA) filed an application with the British Columbia Utilities Commission (Commission) under sections 59-61, 89 and 90 of the *Utilities Commission Act* (UCA) for approval of the terms and conditions and rates for the Shannon Estates Thermal Energy System (SETES) located at 7199 Granville Street, Vancouver, BC. The SETES provides space heating, space cooling and domestic hot water service to the Shannon Mews & Apartments development (Application);
- B. On April 1, 2016, by Order C-4-16, prior to the filing of the Application, the Commission granted SWCRA a Certificate of Public Convenience and Necessity (CPCN) to own and operate the SETES at a total estimated capital cost of \$7.5 million;
- C. The SETES is being constructed in two phases – Phase I is completed and Phase II is expected to be completed sometime in 2018 or early 2019;
- D. By Order G-77-16A dated June 1, 2016, the Commission approved interim and refundable rates for the SETES, effective June 1, 2016, and established a regulatory timetable which included intervener registration, one round of Commission and intervener information requests (IR), and written final and reply arguments;
- E. FortisBC Alternative Energy Services Inc. (FAES) and Mr. Robert Peden registered as interveners;
- F. On July 20, 2016, by Order G-118-16, due to new evidence being filed in SWCRA's reply submission, the Commission reopened the evidentiary phase of the proceeding and established a regulatory timetable which included a second round of IRs followed by written final and reply arguments;
- G. On October 11, 2016, subsequent to SWCRA filing its reply argument, the Commission received a letter from Mr. Dean Thomas Fox, a Phase II owner, representing himself and other owners, collectively referred to as

the Shannon Ratepayers Group (SRG). In his letter, Mr. Fox claimed that adequate notice of the Application was not provided to all the affected parties and requested, among other things, that the Commission: (i) direct SWCRA to provide a copy of Order G-77-16A to all owners; (ii) allow for new intervenor registration; and (iii) allow for further process to review the Application and evidence on the record;

- H. After receiving submissions on SRG's request, the Commission issued Order G-161-16A on November 14, 2016, reopening the evidentiary record and establishing a regulatory timetable which included intervenor registration and submissions on further process;
- I. SRG, Mr. Michael Lui, Mr. Gerald Duffy, and Mr. Martin Parker registered as interveners;
- J. By Order G-193-16 dated December 19, 2016, the Commission established a regulatory timetable that allowed SWCRA to file an updated application no later than February 6, 2017 and provided dates for a third round of IRs with further process to be determined;
- K. On February 6, 2017, SWCRA filed an updated application (Updated Application);
- L. By Order G-52-17 dated April 6, 2017, the Commission established the remainder of the regulatory timetable which included the filing of intervenor evidence, IRs on intervenor evidence, a deadline for SWCRA to file notice of its intent to submit rebuttal evidence, and alternate deadlines for filing written final and reply arguments depending on whether or not SWCRA were to file rebuttal evidence;
- M. In addition, the Panel issued a series of IRs to SWCRA on April 24, 2017. SWCRA responded to the Panel IRs on May 8, 2017;
- N. On April 25, 2017 and April 26, 2017, Mr. Duffy and SRG, respectively, submitted evidence;
- O. On June 1, 2017, SWCRA filed a letter with the Commission stating that it does not intend to file rebuttal evidence;
- P. SWCRA filed its final argument on June 12, 2017. SRG and Mr. Peden filed their final arguments on June 26, 2017 and Mr. Duffy filed his final argument on June 27, 2017;
- Q. On July 11, 2017, SWCRA filed supplementary responses to unanswered Commission IRs (IR No. 3);
- R. SWCRA filed its reply argument on July 12, 2017; and
- S. The Commission has reviewed the evidence in the proceeding and makes the following determinations.

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

1. SWCRA's application to peg the SETES Monthly Capacity Levy to the Southeast False Creek (SEFC) Neighbourhood Energy Utility (NEU) Class 1 (Residential or Mixed Use Residential within SEFC) Fixed Capacity Levy with rate increases pegged to the percentage change in the SEFC Fixed Capacity Levy for Class 1 is approved.
2. SWCRA's application to peg the Consumption Dependent Space Heating rate and the Consumption Dependent Domestic Water Heating rate equal to the arithmetic mean of Step 1 and Step 2 of British Columbia Hydro and Power Authority's (BC Hydro) rate schedule 1101 is denied. SWCRA is directed to peg

the SETES Consumption Dependent Space Heating rate and the Consumption Dependent Domestic Water Heating rate to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Variable Energy Use Charge, with rate increases pegged to the percentage change in the SEFC Variable Energy Use Charge for Class 1.

3. SWCRA's application to peg the Consumption Dependent Space Cooling rate equal to the arithmetic mean divided by two of Step 1 and Step 2 of BC Hydro's rate schedule 1101 is denied. SWCRA is directed to peg the SETES Consumption Dependent Space Cooling rate to SEFC's Class 1 (Residential or Mixed Use Residential within SEFC) Variable Energy Use Charge, with rate increases pegged to the percentage change in the SEFC Variable Energy Use Charge for Class 1.
4. SWCRA is directed to file an application to set rates under a levelized rate structure, as described in the Decision issued concurrently with this order, by no later than June 30, 2019.
5. SWCRA's application for a monthly metering charge of \$9.50 per account is approved. SWCRA is directed to report on the actual hours spent for metering activities on a monthly and annual basis as part of the levelized rate application due no later than June 30, 2019.
6. The SETES rates established by Directives 1 through 3 and 5 of this order are approved on a permanent basis, effective the date of this order, until December 31, 2019.
7. The establishment of a deferral account to record annual revenue deficiencies or surpluses, as described in the Decision issued concurrently with this order, is approved. This deferral account is approved to accrue carrying charges based on SWCRA's weighted average cost of capital. SWCRA is directed to apply for recovery of this deferral account as part of the levelized rate application due no later than June 30, 2019. SWCRA must include in the levelized rate application the details of the annual revenue deficiency or surplus, including the detailed calculations of the annual revenue and a line-by-line breakdown of the annual costs incurred. SWCRA must also compare the annual revenue and costs to the forecast amounts provided in the confidential financial model filed as Appendix E to the Updated Application (Exhibit B-1-1) in this proceeding.
8. SWCRA is approved to establish the Sustainment Capital Deferral Account (SCDA) and the Emergency Repair Deferral Account (ERDA) in accordance with the methodology established in the Decision issued concurrently with this order. These deferral accounts are effective until December 31, 2019.
9. SWCRA's application for SCDA and ERDA rate riders is denied at this time. SWCRA may apply for approval of these rate riders under the conditions outlined in the Decision issued concurrently with this order.
10. SWCRA's application to record 75 percent of the actual regulatory costs incurred for this proceeding in the Regulatory Deferral Account (RDA) is approved. SWCRA is directed to accrue carrying charges on the RDA based on SWCRA's weighted average cost of debt. SWCRA is directed to apply for recovery of the RDA, as outlined in the Decision issued concurrently with this order, as part of the levelized rate application due no later than June 30, 2019.
11. SWCRA is directed to submit a compliance filing to the Commission, no later than January 31, 2018, which provides revised rates and rate schedules based on the rates approved in this order. As part of the compliance filing, SWCRA must provide the supporting SEFC rate schedules to ensure that the SWCRA rates are based on the most recent SEFC rates. In the compliance filing, SWCRA must also calculate the difference between interim and permanent rates and come forth with a proposal for refunding the difference to customers, as further discussed in Section 5.2 of the Decision issued concurrently with this order.

12. SWCRA's application for approval of Standard Fees and Charges and approval of the SETES Tariff is approved subject to the revisions described in the Decision issued concurrently with this order. SWCRA is directed to file all revisions to the SETES Tariff as part of its compliance filing due no later than January 31, 2018.
13. SWCRA must comply with all of the directives in the Decision issued concurrently with this order.

DATED at the City of Vancouver, in the Province of British Columbia, this 19th day of December 2017.

BY ORDER

Original signed by:

R. D. Revel
Commissioner

Shannon Wall Centre Rental Apartments Limited Partnership
Rate Application for the Shannon Estates Thermal Energy System

LIST OF ACRONYMS

Application	Application for rates for the Shannon Estates Thermal Energy System located at 7199 Granville Street, Vancouver, BC
BC Hydro	British Columbia Hydro and Power Authority
CIAC	Contribution in Aid of Construction
Commission or BCUC	British Columbia Utilities Commission
CoV	City of Vancouver
CPCN	Certificate of Public Convenience and Necessity
CRF	Capital Reserve Fund
DHW	Domestic Water Heating
EES	EES Consulting
ERDA	Emergency Repair Deferral Account
ERF	Emergency Repair Fund
FAES	FortisBC Alternative Energy Services Inc.
GCOC	Generic Cost of Capital
GHG	Greenhouse Gas
HVAC	Heating, ventilation, and air conditioning
IR	Information Request
IRR	Internal Rate of Return
KPI	Key Performance Indicators
kWh	kilowatt-hour
NES	Neighbourhood Energy System
NEU	Neighbourhood Energy Utility
NPV	Net Present value
NRES	Neighbourhood Renewable Energy System
PACA	Participant Assistance / Cost Award
PV	Photovoltaic
RDA	Regulatory Deferral Account
ROE	Return on Equity

RS	Rate schedule
SCDA	Sustainment Capital Deferral Account
SEFC	Southeast False Creek
SETES	Shannon Estates Thermal Energy System
SRG	Shannon Ratepayers Group
SWCRA	Shannon Wall Centre Rental Apartments Limited Partnership
TES Guidelines	TES Regulatory Framework Guidelines
UCA	<i>Utilities Commission Act</i>
Updated Application	Application filed on February 6, 2017 in accordance to Commission Order G-193-16
WACC	Weighted average cost of capital
WACD	Weighted average cost of debt

IN THE MATTER OF
the *Utilities Commission Act*, RSBC 1996, Chapter 473

and

Shannon Wall Centre Rental Apartments Limited Partnership
Rate Application for the Shannon Estates Thermal Energy System

EXHIBIT LIST

Exhibit No.	Description
<i>COMMISSION DOCUMENTS</i>	
A-1	Letter dated May 27, 2016 - Order G-77-16 approving interim rates and establishing a Regulatory Timetable
A-2	Letter dated June 1, 2016 – Order G-77-16A amending Order G-77-16
A-3	Letter dated June 17, 2016 – Commission Information Request No. 1
A-4	Letter dated June 21, 2016 – Appointment of Panel
A-5	Letter dated July 20, 2016 – Commission Order G-118-16 and a Regulatory Timetable
A-6	Letter dated August 3, 2016 – Commission Information Request No. 2
A-7	Letter dated August 30, 2016 – Extension to file Reply Submission
A-8	Letter dated October 17, 2016 – Request Comments on Fox letter
A-9	Letter dated November 7, 2016 – Commission Order G-161-16 with reasons for decision and a Regulatory Timetable
A-9-1	Letter dated November 14, 2016 – Amended Commission Order G-161-16A with reasons for decision and Regulatory Timetable
A-10	Letter dated November 8, 2016 – Amendment of Panel
A-11	Letter dated December 7, 2016 – Commission letter to Mr. Fox
A-12	Letter dated December 19, 2016 – Commission Order G-193-16 with Reasons for Decision and Regulatory Timetable
A-13	Letter dated February 21, 2017 – Commission Information Request No. 3
A-14	Letter dated March 7, 2017 – Commission response to SWCRA Extension Request
A-15	Letter dated March 15, 2017 – Commission response to SWCRA Request

- A-16 Letter dated April 6, 2017 – Commission Order G-52-17 with Reasons for Decision and Regulatory Timetable
- A-17 Letter dated April 24, 2017 – Panel Information Request No. 1 to SWCRA
- A-18 Letter dated May 3, 2017 – Commission responding to the Shannon Ratepayer Group’s letter dated May 1, 2017
- A-19 Letter dated May 12, 2017 – Commission extends the deadline for IRs on Intervener Evidence
- A-20 Letter dated May 24, 2017 – Commission Information Request No. 1 on SRG Evidence
- A-21 **CONFIDENTIAL** Letter dated May 24, 2017 – Commission Confidential Information Request No. 1 on SRG Evidence – Cover letter web only
- A-22 Letter dated July 19, 2017 – Commission response to Shannon Ratepayer Group Sur Reply
- A-23 Letter dated August 9, 2017 – Additional responses to BCUC Information Request No. 3

APPLICANT DOCUMENTS

- B-1 **SHANNON ESTATES THERMAL ENERGY SYSTEMS (SHANNON ESTATES)** Letter Dated May 24, 2016 - Thermal Energy System Rate Application
- B-1-1 Letter Dated February 6, 2017 - Shannon Estates Submitting Updated Application
- B-1-2 **CONFIDENTIAL** Letter Dated February 6, 2017 - Shannon Estates Submitting Confidential Updated Application Financial Model
- B-2 Letter dated July 4, 2016 – Response to BCUC Information Request No. 1
- B-3 Letter dated July 4, 2016 – Response to FAES Information Request No. 1
- B-4 Letter dated July 26, 2016 – Shannon Estates Submitting Redacted Version of the SWCRA SETES Financial Model
- B-5 Letter dated August 12, 2016 – Shannon Estates Submitting Responses to Commission Information Request No. 2
- B-6 Letter dated August 12, 2016 – Shannon Estates Submitting Responses to FAES Information Request No. 2
- B-7 Letter dated August 12, 2016 – Shannon Estates Submitting Responses to R. Peden Information Request No. 2
- B-8 REMOVED AND RE-ENTERED AS ARGUMENT
- B-9 Letter dated November 9, 2016 – Shannon Estates Submitting Request to Amend and Clarify G-161-16

- B-10 Letter dated November 29, 2016 – Shannon Estates Submission on Further Process
- B-11 Letter dated December 2, 2016 – Shannon Estates Submitting Comments regarding Confidential Filing Exhibit C7-2
- B-12 Letter dated December 13, 2016 – Shannon Estates Submitting reply to intervener's comments on Further Process
- B-13 Letter dated December 16, 2016 – Shannon Estates Submitting Reply on Full Disclosure
- B-14 Letter dated December 19, 2016 – Shannon Estates Submitting Response to Exhibit C7-4
- B-15 Letter dated March 6, 2017 – Shannon Estates Submitting Request for Extension
- B-16 Letter dated March 7, 2017 – Shannon Estates Submitting Comments on Further Process
- B-17 Letter dated March 10, 2017 – Shannon Estates Submitting Responses to SRG Information Request No. 3
- B-17-1 Letter dated March 23, 2017 – SWCRA Submitting Updated Responses to SRG Information Request No. 3
- B-18 Letter dated March 15, 2017 - SWCRA Submitting request for extension
- B-19 Letter dated March 15, 2017 - SWCRA Submitting notice of legal counsel
- B-20 Letter dated March 23, 2017 – SWCRA Submitting Responses to BCUC Information Request No. 3
- B-21 Letter dated May 8, 2017 – SWCRA Submitting Reply to BCUC Panel IR No. 1
- B-22 Letter dated May 24, 2017 – SWCRA Information Request No. 1 on SRG Evidence
- B-23 Letter dated June 1, 2017 - SWCRA Submitting Notice of Intent Not to File Rebuttal Evidence
- B-24 Letter dated August 9, 2017 - SWCRA Submitting Supplementary Responses to BCUC IR No. 3
- B-24-1 **CONFIDENTIAL** Letter dated July 11, 2017 - SWCRA Submitting Supplementary Responses to BCUC IR No. 3

INTERVENER DOCUMENTS

- C1-1 **FORTISBC ALTERNATIVE ENERGY SERVICES INC. (FAES)** - Letter dated June 20, 2016 - Request to Intervene by Julie Tran

- C1-2 Letter dated June 24, 2016 – FAES Submitting IR No. 1 to Shannon Estates
- C1-3 Letter dated August 3, 2016 – FAES Submitting IR No. 2 to Shannon Estates
- C1-4 Letter dated May 12, 2017 - FAES Submitting Notice of Organizational Change
- C2-1 **PEDEN, ROBERT (PEDEN)** Letter dated June 17, 2016 - Request to Intervene by Robert Peden
- C2-2 Submission dated August 2, 2016 from Robert Peden – REMOVED AND RE-ENTERED AS ARGUMENT
- C3-1 **LUI, MICHAEL (LUI)** Letter dated October 6, 2016 - Request to Intervene by Michael Lui
- C4-1 **DUFFY, GERARD (DUFFY)** Letter dated November 21, 2016 - Request to Intervene by Gerard Duffy
- C4-2 Letter dated April 25, 2017 – Duffy Submitting Evidence - redacted
- C4-2-1 **CONFIDENTIAL** Letter dated April 25, 2017 – Duffy Submitting Confidential Evidence
- C5-1 **CHOW, DOUGLAS AND TONG (CHOW)** Letter dated November 23, 2016 - Request to Intervene by Douglas and Tong Chow - Changed to Interested Party D-26
- C6-1 **PARKER, MARTIN (MARTIN)** Letter dated November 22, 2016 - Request to Intervene by Martin Parker –Changed to Interested Party Status Exhibit D-25
- C7-1 **FOX, DEAN (FOX)** Letter dated November 24, 2016 - Request to Intervene by Dean Fox
- C7-2 Letter dated November 30, 2016 – Fox Submission on Further Process
- C7-3 Letter dated December 14, 2016 - Fox reply submission to Shannon Estates Exhibit B-12
- C7-4 Letter dated December 16, 2016 – Fox Submission Clarification Request on Exhibit B-13
- C7-5 Letter dated December 23, 2016 – Fox Submitting Notice of Name Change to Shannon Ratepayers Group (SRG)
- C-7-5-1 Letter dated December 29, 2016 – Fox Submitting Notice of Name Change to Shannon Ratepayers Group (SRG) – Addition
- C7-6 Letter dated December 29, 2016 – SRG Submitting Confidentiality Declaration and Undertaking Form Dean Fox

- C7-7 Letter dated December 29, 2016 – SRG Submitting Confidentiality Declaration and Undertaking Form Grant Cameron
- C7-8 Letter dated December 30, 2016 – SRG Submitting Confidentiality Declaration and Undertaking Form Gerry Duffy
- C7-9 Letter dated January 30, 2017 – SRG Submitting Confidentiality Declaration and Undertaking Form Gail Tabone
- C7-10 Letter dated February 22, 2017 – SRG Submitting Information Request No. 3
- C7-11 Letter dated February 23, 2017 – SRG Submissions on Further Process
- C7-12 Letter dated March 2, 2017 – SRG Submissions on Further Process
- C7-13 Letter dated March 11, 2017 – SRG Submissions on Further Process
- C7-14 Letter dated April 9, 2017 – SRG Submitting Comments regarding SRG IR No. 3
- C7-15 Letter dated April 21, 2017 – SRG Submitting Comments
- C7-16 Letter dated April 26, 2017 – SRG Submitting Tabone Report with redactions
- C7-16-1 **CONFIDENTIAL** Letter dated April 26, 2017 – SRG Submitting Confidential Tabone Report with Supporting Excel Model
- C7-17 Letter dated May 1, 2017 – SRG Submitting Comments and emails
- C7-18 Letter dated June 7, 2017 – SRG Submitting Responses to BCUC IR No. 1 (non-confidential)
- C7-18-1 Letter dated June 7, 2017 – SRG Submitting Confidential Responses to BCUC IR No. 1
- C7-19 Letter dated June 7, 2017 – SRG Submitting Responses to SWCRA IR No. 1 (non-confidential)
- C8-1 **SAKAMOTO, MICHAEL (SAKAMOTO)** Letter dated November 25, 2016 - Request to Intervene by Michael Sakamoto - Changed to Interested Party D-24

INTERESTED PARTY DOCUMENTS

- D-1 Moorcroft, Marcella Letter dated June 7, 2016 - Request for Interested Party Status by Marcella Moorcroft
- D-2 Chow, Muriel Letter dated June 16, 2016 - Request for Interested Party Status by Muriel Chow
- D-3 Li, Julia Letter dated June 16, 2016 - Request for Interested Party Status by Julia Li

- D-4 Lakhani, Firoz Letter dated June 24, 2016 – Request for Interested Party Status by Firoz Lakhani
- D-5 Lee, Sok Mui Letter dated June 24, 2016 – Request for Interested Party Status by Sok Mui Lee
- D-5-1 Lee, Sok Mui Letter dated June 30, 2016 – Letter of Comment
- D-6 Li, Bor Letter dated June 28, 2016 – Request for Interested Party Status by Bor Li
- D-6-1 Li, Bor Letter dated June 30, 2016 – Letter of Comment
- D-6-2 Li, Bor Letter of Comment dated February 20, 2017
- D-7 Dolman, Z Letter dated November 25, 2016 – Request for Interested Party Status by Zachary Dolman
- D-7-1 Letter dated November 25, 2016 – Dolman Submitting Letter of Comment
- D-7-2 Letter dated January 10, 2017 – Dolman Submitting Letter of Comment
- D-8 Liu, John Chun Letter dated November 22, 2016 – Request for Interested Party Status by John Chun Liu
- D-9 Leung, Wai Chung Blanche Letter dated November 25, 2016 – Request for Interested Party Status by Wai Chung Blanche Leung
- D-10 Wong, Belinda Letter dated November 25, 2016 – Request for Interested Party Status by Belinda Wong
- D-10-1 Letter dated June 1, 2017 – B. Wong Submitting Comments
- D-11 Wong, Jeff Letter dated November 25, 2016 – Request for Interested Party Status by Jeff Wong
- D-11-1 Letter dated May 31, 2017 – Wong Submitting Comments
- D-12 Wong, Sabrina Letter dated November 25, 2016 – Request for Interested Party Status by Sabrina Wong
- D-13 Xiuchuan, Li Letter dated November 25, 2016 – Request for Interested Party Status by Li Xiuchuan
- D-14 Xue, Xiaoyun Letter dated November 25, 2016 – Request for Interested Party Status by Xiaoyun Xue

- D-15 Yin, Chu Cheng Letter dated November 25, 2016 – Request for Interested Party Status by Chu Cheng Yin
- D-16 Yung, Anthony Letter dated November 25, 2016 – Request for Interested Party Status by Anthony Yung
- D-17 Lu, Zhang Letter dated November 30, 2016 – Request for Interested Party Status by Zhang Lu
- D-17-1 Lu, Zhang Letter dated June 19, 2017 – Submitting Comments
- D-18 Qianhong, Zhang Letter dated December 1, 2016 – Request for Interested Party Status by Zhang Qianhong
- D-19 Turner, Francesca Letter dated December 2, 2016 – Request for Interested Party Status by Francesca Turner
- D-20 Ong, Mei Tze Letter dated December 6, 2016 – Request for Interested Party Status by Mei Tze Ong
- D-21 Liu, Diana Letter dated December 6, 2016 – Request for Interested Party Status by Diana Liu
- D-22 Chong, David and Helen Letter dated December 9, 2016 – Request for Interested Party Status by David and Helen Chong
- D-23 Cameron, Grant Online registration dated February 16, 2017 – Request for Interested Party Status by Grant Cameron
- D-23-1 Letter dated February 17, 2017 – Cameron Submitting Comments
- D-23-2 Letter dated February 23, 2017 – Cameron Submitting Comments
- D-24 **SAKAMOTO, MICHAEL (SAKAMOTO)** Letter dated February 24, 2017 – Request to Change to Interested Party Status by Michael Sakamoto
- D-24-1 Letter dated February 21, 2017 – Sakamoto Submitting Comments
- D-24-2 Letter dated June 27, 2017 – Sakamoto Submitting Comments
- D-25 **PARKER, MARTIN (MARTIN)** Letter dated May 8, 2017 - Request to Change to Interested Party Status by Martin Parker
- D-25-1 Letter dated May 8, 2017 - Submitting Comments
- D-26 Chow, Douglas (Chow) Letter dated June 17, 2017 – Request to Change to Interested Party Status by Douglas Chow

D-26-1 Letter dated June 21, 2017 – D.Chow Submitting Comments

D-26-2 Letter dated June 26, 2017 – T.Chow Submitting Comments

LETTERS OF COMMENT

E-1 Sok Mui Lee Letter of Comment dated August 25, 2016

E-2 Li, B Letter of Comment dated August 26, 2016

E-3 French, B Letter of Comment dated November 25, 2016

E-4 Duffy, JP Letter of Comment dated February 14, 2017

E-5 Chow, M Letter of Comment dated February 18, 2017

E-6 Gladwell, A Letter of Comment dated February 16, 2017

E-7 Turner, F Letter of Comment dated February 16, 2017

E-8 French, B Letter of Comment dated March 23, 2017

E-9 Cameron, G Letter of Comment dated May 1, 2017

E-10 Lim, Philip Lester Letter of Comment dated June 26, 2017