

**SRG Response to
British Columbia Utilities Commission
Information Request No. 1 to Shannon Ratepayers Group**

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

**1.0 Reference: INTRODUCTION AND BACKGROUND
Exhibit C7-16, Shannon Ratepayers Group (SRG) Redacted Evidence, p. 1
Compliance with BCUC Thermal Energy Services (TES) Guidelines**

On page 1 of the EES Consulting submission prepared by Ms. Gail Tabone, it states the following:

The Commission issued Guidelines related to TES under Order G-27-15 and those Guidelines govern the rates requested by SWCRA [Shannon Wall Centre Rental Apartments Limited Partnership]. There are many issues that were not adequately addressed by SWCRA, as pointed out in the Final Submission of FortisBC Alternative Energy Services Inc. (FAES) dated July 11, 2016. SRG agrees with the 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

1.1 Please explain in detail Ms. Tabone's rationale for her position that SWCRA does not provide an equitable balance of risk and costs between the utility and the ratepayers.

Response:

The response is based on a review of both the proposed rates and the confidential financial model. After this review we found that there is a greater chance that revenues will exceed costs in the financial model. This is a function of both the starting rate level as well as the financial assumptions.

1.1.1 What specific type of rate or rate structure would provide an equitable balance of risk and cost between the utility and ratepayer? Please explain.

Response:

There is no one type of rate or rate structure that would allow for an equitable balance of risk and cost between the utility and ratepayers. However, a rate that is less reliant on the rate increases associated with unrelated utilities would generally provide less risk to both parties.

1.1.2 How does Ms. Tabone define "equitable" when considering risk? For instance, would a 50/50 sharing of risk be considered equitable or some other proportion? Please specify.

Response:

Ideally a 50/50 sharing of risk would be considered equitable. However, because risk is difficult to quantify in some cases and precision is not always possible, something approaching 50/50 would be considered equitable.

- 1.1.3 If SWCRA did not utilize any deferral account treatment as part of the proposed rate structure, would this change Ms. Tabone's position on the balance of risk and cost between SWCRA and ratepayers? Please explain why or why not.

Response:

Eliminating the deferral account treatment would shift risk away from ratepayers if SWCRA were to absorb any costs associated with those items included in the deferral accounts. If SWCRA were to replace the deferral account treatment by increasing the proposed rates to recover the costs included in the deferral account there would be additional risk to the ratepayers as the amount included in the increased rate may be higher than then actual costs incurred.

- 1.2 Please explain in detail Ms. Tabone's rationale for her position that SWCRA does not provide transparent treatment of controllable costs.

Response:

Because the rates proposed by SWCRA are based on the rate levels for other utilities, ratepayers and the Commission will not have the opportunity to review the actual costs facing SWCRA on a regular basis. Because the rates will escalate along with the BC Hydro and SEFC rates, it is expected that SWCRA will likely not need to re-submit the SETES for a long period of time. While SWCRA may have the ability to control some, but not all, of the costs it faces, any reduction in those costs will be a direct benefit to SWCRA. Because the Commission and SWCRA will not have the ability to review those costs periodically, there is no transparency provided.

- 1.2.1 With specific reference to the costs outlined by SWRCA in the non-confidential section of SWCRA's financial model, please identify which costs Ms. Tabone considers to be controllable and which are considered to be non-controllable. Please support each classification with an explanation.

Response:

Non-controllable costs would include:

- electricity and natural gas expenses – the quantity required will depend on the energy used by ratepayers and the cost will depend on the rates set by the various utilities
- Insurance and tax expenses – these costs are set by outside parties

Controllable costs would include:

- Administrative, accounting, legal and engineering costs – SWCRA has control over the level of time spent on these activities, the level of detail included in performing these activities, the frequency of these activities, the provider and hourly rates related to these activities, and the reporting requirements for these activities.

Costs that have both a Non-controllable and Controllable component would include:

- Capital expenditures – while some capital expenditures are required as a result of equipment failure or routine replacement, SWCRA also has some control over these costs based on the level of maintenance provided over time, the ability to plan for repairs/replacements rather than waiting until a failure occurs, and the ability to decide between the cost-effectiveness of replacement vs repair and or reduced output.
- Metering maintenance and collection – while some of these expenses are required based on the number of units, SWCRA does have control over the frequency of meter reading, the system used and/or contractors used for meter reading activities, and the use of technical advancements in meter reading over time.

1.2.2 Please explain what steps SWCRA could take to provide transparent treatment of controllable costs.

Response:

We have not recommended any steps that would provide greater transparency in costs. Adding required periodic rate filings or reviews of actual results would likely not be cost-effective. But that makes it all the more critical that the rates approved in this process are reasonable and do not provide the potential for SWCRA to earn excessive profits.

1.3 Given that SWCRA is setting rates for the first time, please explain the applicability of “rate shock” to SWCRA’s rate application.

Response:

Concerns about rate shock are related to the potential for large rate increases based on the proposed rates that are tied to those of BC Hydro and SEFC rate components. Because those two rate components are very distinct from one another there is no way to control whether they both have large increases at the same time. The proposed deferral account recovery will added to the potential for stacked rate increases that may be reasonable individually, but may be high when combined.

1.4 Please provide Ms. Tabone’s definition of rate shock and explain how this definition was derived.

Response:

Standard utility industry practice defines rate shock as a rate increase of 10 percent or more.

1.5 Please describe a type of rate and/or rate structure which would adequately address the potential for rate shock given the specifics of the SWCRA thermal energy system.

Response:

SRG has proposed that the capacity levy have a fixed escalation factor rather than being based on the SEFC rate. This will help reduce rate uncertainty and the potential for rate shock.

- 2.0 **Reference: DETERMINATION OF SWCRA EARNINGS Exhibit C7-16, SRG Redacted Evidence, pp. 3–4; Exhibit B-20, BCUC IR 88.1, Appendix B – Generic Cost of Capital (GCOC) Financial Model, Tab “GCOC Model” Financial model inputs**

Ms. Tabone states on page 3 of the EES Consulting submission: “We created an additional section in the financial model where we calculated the earnings without the carrying costs and future capital expenditures. We then calculated the Internal Rate of Return (IRR) for the project using those adjusted earnings relative to the \$7.5 million investment.”

- 2.1 Please clarify which version of SWCRA’s financial model was used by Ms. Tabone to calculate the Internal Rate of Return (IRR). Please provide the reference (i.e. exhibit number and filing date) for the financial model.

Response:

The model used was based on the file titled “2_B5_CONFIDENTIAL_SWCRA_SETES_FINANCIALMODEL_TO_BCUC.XLSX “ and provided to SRG on a confidential basis.

Ms. Tabone further states on page 3 that “the financial model includes the cost of future capital expenditures in its earning calculations... Based on our understanding of deferral accounts and the fact that the offsetting revenues are not included in the financial model, we do not believe that the capital expenses should be included when calculating earnings.”

- 2.2 In the event that the Commission does not approve the Capital Reserve Fund (CRF) deferral account, would Ms. Tabone’s position that the future capital expenditures should not be included in the earnings calculation change? Please explain why or why not.

Response:

If the deferral accounts and the ability for SWCRA to recover capital costs through a rate rider are not approved, then it would be appropriate to include the capital expenses **in the years they are projected to occur** when calculating earnings.

In response to BCUC Information Request (IR) 88.1, SWCRA filed the “Generic Cost of Capital (GCOC) Financial Model” as Appendix B to Exhibit B-20.

- 2.3 In the event that the CRF deferral account is not approved, would Ms. Tabone agree that the forecast capital expenditures should be included as a “Capital Replacement” on row 30 of the GCOC Financial Model, Tab “GCOC Model” but not as an expense on row 106 “Capital Expenditures (from CRF)”? Please explain why or why not.

Response:

Agreed. The replacement of capital would be considered additions to rate base and as such should be included in the rate base totals. Capital items are typically added to rate base and allowed an earned return and depreciation and are therefore not considered an expense item.

Note that the capital replacement items should be added in the years in which they are expected to occur rather than spread out among all years of the financial model.

3.0 **Reference: DETERMINATION OF SWCRA EARNINGS
Exhibit C7-16, SRG Redacted Evidence, pp. 3–6
IRR and return on equity (ROE)**

Ms. Tabone states on page 3 of the EES Consulting submission: “This results in an IRR of 7.1% and would reflect the combined earnings on both debt and equity. When compared to the generic weighted average cost of capital (WACC) of 5.7%, the earnings are well above what would be allowed under the WACC approach.” [Emphasis added]

3.1 Please clarify what Ms. Tabone means by the statement that the IRR of 7.1 percent reflects “the combined earnings on both debt and equity.” Please support this response by providing a numerical calculation.

Response:

In calculating a rate of return there are typically two elements: the cost of debt and the return on equity. If the rate of return is applied to the total investment of the project, some of which is funded with debt and some of which is funded with equity, then the result must be compared to a total rate of return not the return on equity. In that sense the earnings covers both the debt and equity portion of the return.

If the cost of debt is subtracted from the total return each year, then the return reflects only the equity portion and should be compared only to the equity in the project.

The following is a numerical calculation:

Capital funded from debt: \$6 million (60%)
Capital funded from equity: \$4 million (40%)
Total capital cost: \$10 million

If the revenues result in an annual return of \$700,000 the total return would be 7.0%. This return would need to be compared to a weighted cost of capital, in this case 5.7%.

Conversely, if the utility were to treat the cost of debt as an expense item, at an annual cost of \$250,000, that amount would need to be subtracted from the annual return. This would result in a net return of \$450,000. Because the cost of debt is already accounted for as an expense, this net return of \$450,000 would be the return on equity. It would need to be compared to the \$4 million in equity, not the \$10 million total cost. In this example the resulting return on equity would be 11.3%. It would need to be compared to a generic 9.5% equity rate, not the 5.7% WACC.

- 3.2 Please explain the relevance and appropriateness of utilizing a cash flow IRR analysis for rate making purposes.

Response:

A cash flow IRR analysis is not typically used for ratemaking purposes. However, in this case SWCRA is filing rates that are tied to other utility rates allowing for periodic rate increases negating the need for a typical rate of return approach filed at regular intervals. This approach has the benefit of having lower initial rates that escalate over time. If a traditional ratemaking approach were used the rates would start out high due to the fact that it is a new utility and the capital is all paid for upfront. The approach proposed by SWCRA also reduces the periodic regulatory cost that would be required on a regular basis, which would be burdensome given the small size of the utility.

To establish whether the return resulting from the SWCRA approach and proposed rates are reasonable relative to the traditional ratemaking approach over time, it is necessary to evaluate whether the resulting return the SWCRA is expected to earn is too high or too low. To look at whether the resulting level of the return is appropriate it needs to be compared to a generic level of return. However, because the rates are shaped differently over time as compared to a traditional approach, the return over the long-term must be considered rather than the return in just the first few years. An average of the percent return over 30 years could be used for the comparison but that would not account for the time value of money. That is why we chose to use the IRR method, as that provides the average rate of return over the long-term.

- 3.3 Please explain why Ms. Tabone did not incorporate annual depreciation expense into the IRR analysis.

Response:

Because the IRR looks at the initial investment relative to earnings in future years, it does not reflect earnings on a typical rate base approach where the investment is depreciated over time. It would not be appropriate to use depreciation as an expense item if the value of the investment does not include accumulated depreciation over time. Because the IRR approach and the return on rate base approach are so different, the IRR cannot be expected to mimic all of the attributes of a return on rate base approach. The IRR is simply being used as a tool to determine whether the resulting earnings are reasonable and not to calculate the allowed return in a given year.

- 3.4 Is Ms. Tabone aware of any regulatory rate-setting approach that allows for a utility to earn an equity return on their full undepreciated investment? Please discuss.

Response:

No. In a typical regulatory rate-setting approach the return is calculated on the basis of the rate base in each year, which would reflect accumulated depreciation.

- 3.5 Does Ms. Tabone consider it common practice in rate regulation to base the utilities' earned return on the mid-year depreciated capital balance? If not, please explain.

Response:

Yes.

- 3.6 Did Ms. Tabone consider a more traditional regulatory approach, rather than an IRR cash flow approach, such as comparing SWCRA's forecast revenues to SWCRA's cost of service (i.e. the sum of the cost of energy (electricity and gas), operating expenses, depreciation and tax expense) plus an allowed return based on a capital structure of 42.5 percent equity (ROE of 9.5 percent) and 57.5 percent debt (at 3 percent) calculated on the mid-year depreciated capital balance (rate base)?

Response:

Yes, that type of approach was considered but was not found to be the best approach for ratepayers.

- 3.6.1 Please discuss if the above-described approach is a reasonable approach.

Response:

A traditional approach would be much easier to regulate and review but is not reasonable for ratepayers given the circumstances of the system. The problem with the traditional approach in this case is that it would yield much higher rates in the early years compared to what has been proposed and also in comparison to alternative energy sources. Because the SETES utility is a small system and is brand new, the rate base starts out high and declines over time. There are not the typical additions to rate base over time as a system grows in both facilities and customer sales. With the traditional approach, ratepayers would pay higher rates in the early years when compared to the proposal. This results in current owners paying higher rates than customers in the future, leading to temporal inequities.

- 3.6.2 If Ms. Tabone considers this to be a reasonable approach, please provide a low, medium and high base case calculation for a minimum of 10 years.

Response:

Not applicable.

4.0 **Reference: ISSUES WITH SPECIFIC ASSUMPTIONS**
Exhibit C7-16, SRG Redacted Evidence, pp. 4–6
Load forecast (sales)

On page 4 of the EES Consulting submission, Ms. Tabone explains how she adjusted the load forecast for the medium and high cases.

4.1 In percentage terms, please fill out the following table for the high case.

| | DWH | Space Heating | Cooling |
|------|---------------|---------------|---------------|
| Low | no adjustment | no adjustment | no adjustment |
| Med | 100% | 50% | 150% |
| High | | | |

Response:

| | DWH | Space Heating | Cooling |
|------|---------------|---------------|---------------|
| Low | no adjustment | no adjustment | no adjustment |
| Med | 100% | 50% | 150% |
| High | 200% | 100% | 300% |

4.2 Please explain further how the medium case was derived.

Response:

The medium case was simply the average between the low and high case. This was done to account for factors that would impact the actual usage for the initial year of operation, such as weather deviations from normal, inefficiencies during the start-up phase, ratepayer lack of information about expected bills and ratepayers adjusting to their new homes. Because the system and ratepayers are both new there was insufficient historic data and it was impossible to measure the impact of these factors on a quantitative basis. Use of the simple average was considered reasonable given the high level of uncertainty in the numbers.

5.0 **Reference: ISSUES WITH SPECIFIC ASSUMPTIONS**
Exhibit C7-16, SRG Evidence, pp. 4–6
Tax expense

Ms. Tabone states on page 5 of the EES Consulting submission that “we believe that SWCRA has overestimated the income taxes. In all cases, we updated the income taxes to reflect the 8% CCA Alternative as provided by SWCRA in the Appendix B – GCOC Financial Model.”

5.1 Other than to reduce the tax expense, what rationale does Ms. Tabone have for selecting a CCA rate of 8 percent rather than 4 percent?

Response:

We believe it is reasonable to expect that SETES can claim or be granted an 8% CCA based on the fact that this is the assumption for CORIX for its UBC TES project. The CORIX 2015 Final Rate Application is attached as part of the SWCRA's 2nd set of responses to the BCUC found in Exhibit B-5. In Section 4-3 of that Application it states that "the DES is expected to qualify for the UCC class 17 capital cost allowance of 8% (declining balance)." This is also shown in Table 22 of that Application, where buildings are shown to have a 4% CCA assumption while the natural gas system is expected to have an 8% CCA assumption.

- 5.2 Please explain why Ms. Tabone used an 8 percent CCA rate in all three of the base cases. Why was it not deemed appropriate to use 4 percent as the low case, 6 percent as the medium case and 8 percent as the high case?

Response:

The CCA rate is dictated by tax regulation and is invariant. For that reason we used the same rate for all cases.

- 5.3 Did Ms. Tabone's income tax calculation include the forecast revenue from the deferral account rate riders? If not, please explain why not.

Response:

No, because the financial model does not include any revenue from rate riders. The CCA rate will not change as a result of rate riders.

- 6.0 **Reference: AVOIDED CAPITAL COST
Exhibit C7-16, SRG Redacted Evidence, p. 6
Avoided capital cost**

Ms. Tabone states the following on page 6 of the EES Consulting submission:

Because sales and rental prices are set through competition within the real estate market, not strictly based on the costs to develop the project, the sales price likely reflects the market value of alternative units that did include the cost of space and water heating appliances. Because the project developer was able to avoid \$4.95 million in costs, they likely collected excess profits when the units were sold. It is not appropriate for SWCRA to then earn profit through rates on the full \$7.5 million cost of the SETS.

- 6.1 Please explain if the concept of "avoided capital cost" is common when calculating rates for TES projects.

Response:

Each project has unique features. The "avoided capital cost" concept will be applicable to some

but not all TES projects, depending on the facts in each case. In the present case the applicant avoided capital costs and this should be taken into consideration by the BCUC in the rate setting process. Here, the applicant is also the developer who set sales prices based on competition within the real estate market, not strictly based on the costs to develop the project. The sales prices reflect the market value of alternative units whose cost to develop did include the cost of space and water heating appliances.

- 6.2 Please clarify if Ms. Tabone has evidence to support the statements regarding avoided costs summarized in the above preamble, or if Ms. Tabone is making an assumption that excess profits were made when the units were sold.

Response:

This issue is one of fairness. It is a fact that the cost of construction/development did not include the cost of space and water heating appliances. This resulted in an estimated savings/extra profit to the applicant/developer of approximately \$4.95 million. Sales prices for condos were set through competition within the real estate market and were not based on the costs to develop the project. The prices reflected the market value of alternative units that did include the cost of space and water heating appliances.

The issue of avoided capital costs was raised in SRG's first letter from Mr. Fox dated October 17, 2016 (attachment to Exhibit A-8). It states, in part:

"It (the TES) is a mechanical system owned by the Applicant, a for profit legal entity working in a non-arms-length relationship with the Vendor.

...

Among other things, they (ratepayers) are concerned about paying for the TES through the purchase price of their strata units and paying for it a second time under a capital levy.

...

My clients question if there was an offset to the deemed capital of the TES. There should be an offset for costs avoided by the developer not installing heating and cooling equipment and hot water heaters in every unit."

Additional facts supporting this issue include:

- the applicant/developer did not market units on the basis of savings to purchasers for avoided costs for space and water heating appliances;
- the applicant/developer has not offered any evidence that it took into account the avoided capital costs savings in any way that would address the fairness issue raised in Mr. Fox's first letter of October 17, 2016 and consistently since then;
- the applicant/developer has filed Exhibit B-23, in which it gave notice that it does not intend to file rebuttal evidence; in so doing, it has waived its last opportunity to challenge factually or on any other basis, the correctness of SRG's position on this issue.

- 6.3 Please provide a hypothetical numerical example to clarify the statements made in the above preamble related to excess profits and avoided costs.

Response:

The following example illustrates the point made in the statements.

Two condominium units are sold at the same time for \$600,000. Both have identical land costs, are situated in the same area and both include the same space and amenities. When a potential buyer is looking at units for sale, units A and B will be identical and the buyer will be willing to pay \$600,000 for either unit based on the comparable sales for other units in the area.

The cost to build unit A was \$550,000. Unit A contains a conventional HVAC and hot water system installed in the units at a cost of \$5,000. Homeowner A will be required to pay all electric and gas costs for space heating, water heating and air conditioning.

The cost to build Unit B was \$545,000 because it did not include an HVAC and hot water system at a savings of \$5000 to the developer. It is serviced by a TES system and Homeowner B will be required to pay the TES rates for space heating, water heating and air conditioning.

The developer of Unit A makes a profit of \$50,000 (\$600,000 - \$550,000). The developer of Unit B makes a profit of \$55,000 (\$600,000 - \$545,000) because he avoided development costs of \$5000 for the installation of space heating, water heating and air conditioning while at the same time recovering the full capital costs of the TES through the TES rates.

In the present case, the developer and the owner of the TES are the same entity, Wall Financial Corporation. It would be unfair to ratepayers and it would be unjust or unreasonable to allow the developer to recover the full \$7.5 million capital cost of the TES when it saved \$4.95 million in avoided development costs for the installation of space heating, water heating and air conditioning equipment.

- 7.0 **Reference:** **SRG PROPOSAL FOR SETES RATES**
Exhibit C7-16, SRG Redacted Evidence, pp. 7–8
SRG proposal for Shannon Estates Thermal Energy System (SETES) rates

Ms. Tabone states on page 7 of the EES Consulting submission that she proposes that the metering charge be maintained as proposed by SWCRA.

- 7.1 Please explain the basis for this proposal.

Response:

The proposed metering charge is designed to recover the costs associated with metering and as such is considered appropriate. We have not specifically reviewed whether the cost of metering could be done more cost-effectively.

Ms. Tabone further states on page 7: “As the variable rate is set to recover variable costs, the capacity levy should be set so that the ROE is more than 9.5%.”

7.2 Please clarify that the statement in the above preamble should read “...so that the ROE is not more than 9.5%.”

Response:

The clarification is appropriate.

8.0 **Reference: REGULATORY COSTS**
Exhibit C7-16, SRG Redacted Evidence, pp. 8–9
Recovery period

Ms. Tabone states the following on page 9 of the EES Consulting submission: “As SWCRA does not expect to have regulatory costs on an ongoing basis, this should be treated like other capital costs and collected over the life of the project, not over a 60-month period.”

8.1 Based on Ms. Tabone’s statements in the above preamble, is it Ms. Tabone’s position that SWCRA would not come forward with a subsequent rate application over the entire life of the project?

Response:

Given that the proposed rates are set on the basis of the BC Hydro rates and SEFC rates, both of which will escalate over time, it is quite possible that SWCRA will earn enough revenue to avoid future rate applications. It is not clear if and when there would be a subsequent rate application. For that reason, the costs should be recovered in a manner that reflects that uncertainty. The submission further states that the costs should be collected over a minimum 10-year period. By collecting the costs over a 10-year (or greater) period the costs will more likely reflect the likely life of the project, with the project being the regulatory process rather than the entire physical facilities of the TES project.

8.1.1 If yes, please explain the rationale for your position.

Response:

Please refer to 8.1.

8.1.2 If not, how will subsequent regulatory costs be treated?

Response:

In the event that SWCRA does file a rate application in the future, the costs of that application would be appropriate for recovery in the future.

8.2 If the Commission approves SWCRA's request to have a regulatory account for regulatory costs is Ms. Tabone suggesting that these costs be recovered by each unit over the same period of time?

Response:

The position is that the costs should be recovered over the same length of time for each unit. One option could include collecting from all units at the same time, starting with when the last unit is occupied. The other option would be to stagger the start dates for collection based on when the units are occupied but with each collecting for the same number of months in total.

8.2.1 On what basis is Ms. Tabone suggesting the regulatory costs be allocated to a specific unit? As a percentage of the bill, based on square footage, or some other allocation methodology? Please explain.

Response:

The costs could be collected as a percent of the bill, as proposed by SWCRA, or another method if the Commission finds the percent of the bill to be inappropriate.