

Orders

British Columbia Utilities Commission ~ Thermal Energy Systems Framework Revisions to the Thermal Energy Systems Regulatory Framework Guidelines ~ Final Order

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Related Decision or Reconsideration: See also - [British Columbia Utilities Commission ~ Proposed Regulatory Framework including an Exemption for certain Thermal Energy Service Utilities ~ Decision - 2015-03-02](#)
See also - [British Columbia Utilities Commission ~ Review of Thermal Energy Systems Regulatory Framework Guidelines ~ Final - G-48-25 - 2025-02-26 - G-General](#)

Company Name: BC Utilities Commission

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

and

Thermal Energy Systems Framework
Revisions to the Thermal Energy Systems Regulatory Framework Guidelines

BEFORE: D. M. Morton, Panel Chair/Commissioner
L. A. O'Hara, Commissioner
R. D. Revel, Commissioner
March 2, 2015

O R D E R

WHEREAS:

- A. On August 28, 2014, in Order G-127-14, the British Columbia Utilities Commission (Commission) approved and issued the Thermal Energy System (TES) Regulatory Framework Guidelines;
- B. On August 1, 2014, in the FortisBC Alternative Energy Services (FAES) Application for Certificate of Public Convenience and Necessity (CPCN) and Rate Approvals Established in Agreements for TES for the Artemisia Development proceeding (Artemisia proceeding), Ameresco Canada Inc. (Ameresco) raised the question (Exhibit D-1 in the 2014 Artemisia proceeding) of whether, in the case of a purchase of a TES, the purchase price should be the basis for the determination of the status of the TES for exemption or whether it should be the actual capital cost to construct the TES;
- C. On September 17, 2014 (Exhibit A-10 in the TES Regulatory Framework proceeding) the Commission requested submissions from participants on the question of capital costs versus the purchase price and regulatory status of a TES;
- D. On October 3 and October 24, 2014, the Commission received submission from FAES, Ameresco, the BC Sustainable Energy Association and Sierra Club of BC (BCSEA-SCBC) and the British Columbia Pensioners' and Seniors Organisation, Active Support Against Poverty, BC Coalition of People with Disabilities, Counsel of Senior Citizens' Organisation of BC, and the Tenant Resource Advisory Centre (BCOAPO);

- E. The Commission has considered the submissions made by interveners on the issue raised by Ameresco, as well as other issues raised by parties within their submissions, and finds that several clarifications and housekeeping modifications to the Commission's Thermal Energy Systems Regulatory Framework Guidelines are warranted.

NOW THEREFORE pursuant to section 11 of the *Administrative Tribunals Act* in accordance with the Decision issued concurrently with this Order, the Commission's Thermal Energy Systems Regulatory Framework Guidelines, attached as Appendix A to this Order, are in effect.

DATED at the City of Vancouver, in the Province of British Columbia, this 2nd day of March 2015.

BY ORDER

Original Signed By:

D. M. Morton
Panel Chair/Commissioner

Attachment



British Columbia Utilities Commission
Thermal Energy Systems
Regulatory Framework Guidelines

For further information, contact:

British Columbia Utilities Commission Attention: Commission Secretary Sixth Floor, 900 Howe Street Vancouver, BC V6Z 2N3	Telephone: (604) 660-4700 Toll Free: 1-800-663-1385 Facsimile: (604) 660-1102 Commission.Secretary@bcuc.com website: www.bcuc.com
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INTRODUCTION

These Guidelines describe the regulatory framework for Thermal Energy Systems (TES). They are intended to inform persons (which may include an individual or a company) who own or operate TES (TES Providers) on the regulatory approval process and ongoing regulatory requirements to construct and operate a TES and charge rates to customers of those Thermal Energy Systems in British Columbia.

These Guidelines may be revised or updated from time to time in order to incorporate lessons learnt and adjust to evolving market circumstances and changes to the *Utilities Commission Act* (UCA).

To whom do these Guidelines apply?

These Guidelines are applicable to all TES Providers in the Province of British Columbia.

What is a Thermal Energy System?

A Thermal Energy System consists of equipment or facilities for the production, generation, storage, transmission, sale, delivery or provision of heat, hot water and/or cooling from one or more thermal energy sources and through a distribution system. Energy sources may include waste heat, renewable (solar, ground/water source or air source heat pumps, geothermal, biomass etc.) as well as non-renewable energy sources. A TES may include plant, equipment, distribution piping, apparatus, property and facilities employed by or in connection with the provision of thermal energy services.

What is a TES Provider?

A TES Provider is a person who owns and/or operates a Thermal Energy System.

Role of the British Columbia Utilities Commission

The British Columbia Utilities Commission (Commission) is responsible for general supervision of public utilities in British Columbia. The Commission's role is to ensure that public utility customers receive safe, reliable, non-discriminatory energy services at just and fair rates to ensure that the utility's shareholders have a reasonable opportunity to earn a fair return on their investment.

The Utilities Commission Act

The UCA sets out the Commission's duties and authority including regulation and general supervision of public utilities in British Columbia. Part 3 of the UCA lists the duties, responsibilities and restraints imposed upon a public utility.

Generally, if a person intends to purchase, construct or operate a public utility plant or system, or extend an existing public utility infrastructure, a Certificate of Public Convenience and Necessity (CPCN) is required. Approval of rates is also required before any customer can be billed for utility service.

The Commission has the authority to impose administrative penalties on utilities if they do not comply with the requirements of the UCA^[1] or with Commission Orders. For more information on the Commission, please visit: www.bcuc.com.

UCA Definition of and Exclusions from the Definition of Public Utility

The UCA defines a public utility as a person owning or operating equipment or facilities in British Columbia for the provision of electricity, natural gas, steam or any other agent for the production of light, heat, cold or power to or for the public or a corporation for compensation.

The UCA specifically excludes the following from the definition of public utility and therefore, exclusion from regulation by the Commission^[2]:

- a municipality or regional district providing services within its own boundaries;
- a person not otherwise a public utility who provides the service or commodity only to the person or the person's employees or tenants, if the service or commodity is not resold to or used by others; and
- a person not otherwise a public utility who is engaged in the production of a geothermal resource, as defined in the *Geothermal Resources Act*.

The *Geothermal Resources Act* defines "geothermal resource" to mean the natural heat of the earth and all substances that derive an added value from it, including steam, water and water vapour heated by the natural heat of the earth and all substances dissolved in the steam, water or water vapour obtained from a well, but does not include water that has a temperature less than 80°C at the point where it reaches the surface^[3].

Any exclusion from the definition of a Public Utility is with respect to a specific utility system. An example of this is the City of Nelson, who provides electrical energy to customers within its boundaries, and also to customers in the surrounding areas. As a municipality, the City of Nelson is excluded from the definition of a Public Utility with respect to energy sales within its own boundaries. However, the Commission does regulate the City of Nelson's sales with respect to customers in the surrounding area.

REGULATION OF THERMAL ENERGY SYSTEMS

Introduction

Under the *Utilities Commission Act*, a TES Provider is considered a public utility. However, by OIC 399, 400 and 401 and Commission Orders G-119-14, G-120-14 and G-121-14, certain TES Providers are exempt from certain provisions of the UCA. Together, these exemptions provide a scaled approach to the regulation of TES. This framework provides increased regulatory oversight as the size and scope of the TES increases. It consists of four categories of TES:

- i. **Micro TES:** A TES with a capital cost of \$500,000 or less is exempt from Part 3 of the UCA other than sections 42, 43 and 44.
- ii. **Strata Corporation TES**^[4]: A TES owned or operated by a Strata Corporation, or the Strata Corporation's lessee, trustee, receiver or liquidator, that supplies the Strata Corporation's owners, is exempt from Part 3 of the UCA other than sections 42, 43 and 44.
- iii. **Stream A TES:** An On-Site TES with an Initial Capital Cost above \$500,000 but less than \$15,000,000 is exempt from sections 44.1, 45-46 and 59-61 of the UCA. TES Providers are required to register Stream A TES prior to building or otherwise acquiring the Stream A TES.
- iv. **Stream B TES:** All other TES will be regulated similar to other Public Utility systems. An application for a CPCN^[5] and a rate approval application are required.

Although TES described in (i) and (ii) above are not exempt from all sections of the UCA, they will be referred to as "Exempt TES" within this Guide.

In Order G-27-15 and the associated Reasons for Decision, the Commission clarified the term "capital cost" as it is used to define the threshold between a Micro TES and a Stream A TES and the threshold between a Stream A TES and a Stream B TES. The exemption threshold is based on the cost to construct the TES and is not related in any way to the purchase price, whether that purchase price is below or above the cost to construct the TES. In the decision, the Commission recognizes there may be ambiguities in a determination of the cost to construct. For example:

1. A piece of equipment may be purchased or leased. How should leased equipment be treated in the as built cost?
2. A charge for the land occupied by the equipment/control room may be levied on the utility. Should the value of this land be recognized in the as built cost?
3. How should as built costs for extant, unregistered TES be determined, especially if the construction cost records are no longer available.

In cases such as these, including cases where the original cost is not easily available, the utility is expected to use its best efforts to determine the construction cost. The construction cost should reflect the cost to acquire the physical components at the time the TES is constructed along with all costs that are incurred to install the components and ensure that they operate correctly at the time of commissioning.

The Decision also stated that in cases where a purchased TES is an exempt TES, it will remain exempt with no requirement to register, regardless of the purchase price. Further, in cases where the purchased TES is Stream A, it will remain Stream A regardless of the purchase price.

All TES that were in service before August 28, 2014 without a CPCN and/or where no previous exemption was granted are deemed to be Stream A systems that require registration upon issuance of these Guidelines.

A **site** is a legal property or parcel with defined boundaries for which a municipal building permit is issued or pending approval. A site is usually contained within the boundaries of a city block and is not a large multi-phase master development parcel which may be part of municipal re-zoning applications or multiple building permit processes into the future.

An **On-Site** TES consists of thermal energy generation and distribution equipment and fixtures that are physically located on the same site as the thermal load. It is designed to meet the energy demands of one or more customers on that site and doesn't share any generation or distribution facilities beyond the bounds of the site.

The characteristics of a Stream A TES are further described in section 2.3.1

A TES Provider could own and/or operate both regulated and exempted TES. An exemption is with respect to a specific TES - and does not necessarily apply to all of the TES Providers' TES.

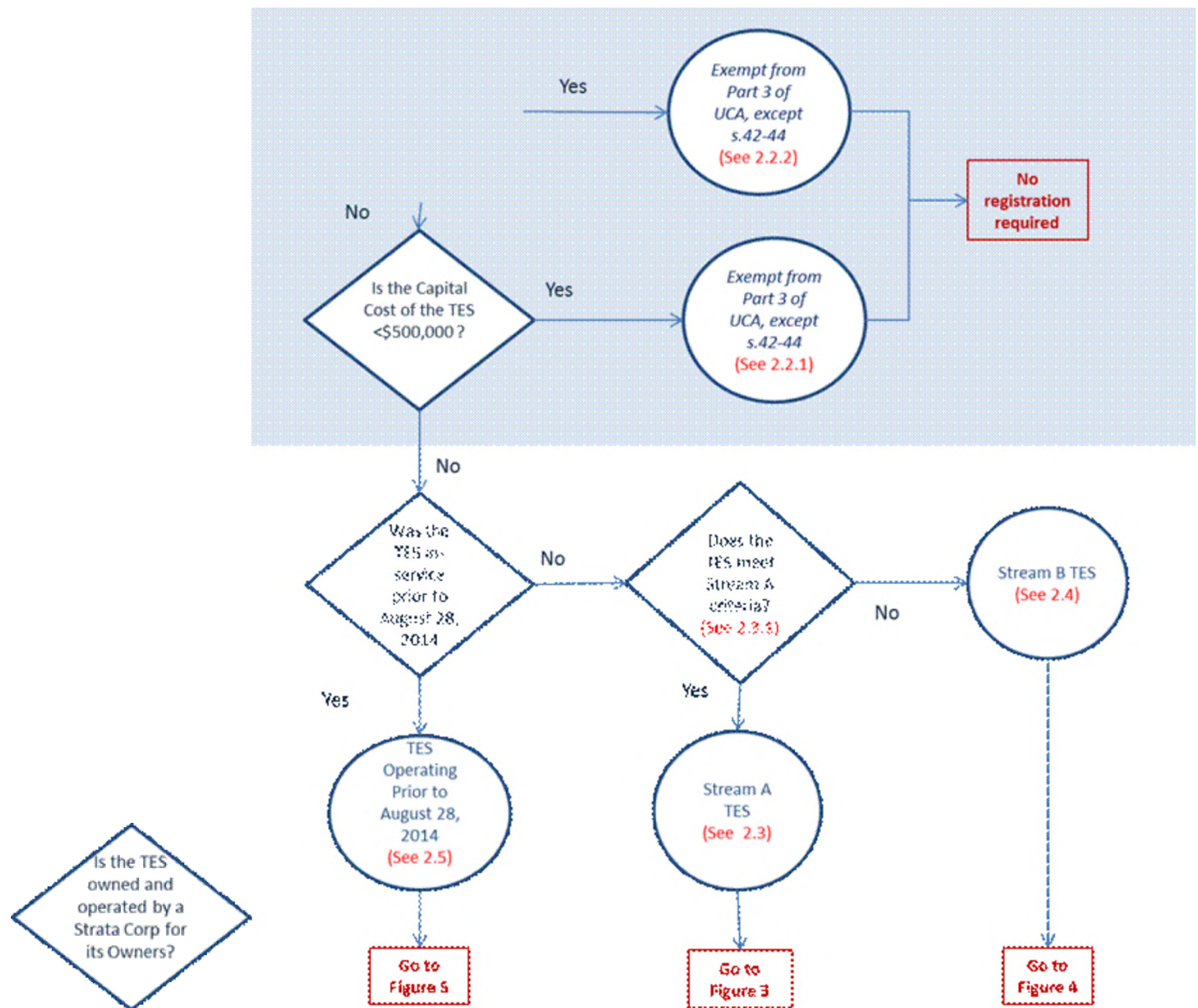
Figure 1 illustrates the dollar thresholds for each regulatory stream. TES operated by Strata Corporations are not subject to any upper limit.

Figure 1: The TES Regulatory Framework

TES Cost	On Site TES	Other TES
≤\$500,000	Micro TES	Micro TES
≤\$15 Million	Stream A Regulation	Stream B Regulation
No upper \$ limit		

Figure 2 is designed to assist TES Providers in assessing which regulatory stream may be applicable for each Thermal Energy System. If the Applicant has questions on whether a particular TES is exempt, Stream A or Stream B TES, it should contact the Commission before submitting a registration or an application. The Commission ultimately decides the regulatory stream applicable to the particular TES and regulates accordingly.

Figure 2: Determination of the Appropriate Regulatory Stream



Exempt TES

Micro TES Exemption

A TES with an Initial Capital Cost that is less than \$500,000 is considered a Micro TES and is exempt from active regulation, including the requirement for a CPCN and Commission oversight of rates. If subsequent capital additions result in a TES that has, in aggregate, a capital cost of over \$500,000, registration under Stream A or Stream B, as applicable, will be required, unless the system meets the conditions of the Strata exemption described below.

A Micro TES Provider must be able to demonstrate that the capital cost of the system and any extensions, in aggregate, is less than \$500,000, if requested by the Commission to qualify for this exemption.

Strata Exemption

A TES owned by a Strata Corporation that exclusively serves that Strata Corporation's Strata Unit Owners is exempt from active regulation by Commission Order G-120-14. A Strata Corporation that owns the TES and provides energy exclusively to its Strata Unit Owners ^[6] is subject to the *Strata Property Act*, which offers recourse and consumer protection to Strata Unit Owners. Accordingly, customers can find recourse under the *Strata Property Act*, and not through the Commission under the UCA. This exemption does not include a TES with a customer that is a Strata Corporation.

Registration and Reporting Requirements for Exempt TES

There are no registration or reporting requirements for persons owning or operating an exempt Thermal Energy System. However, if the same person also owns or operates a Stream A or Stream B TES, in addition to one or more exempt TES, then that person will be subject to registration and reporting requirements for the Stream A and/or Stream B TES, as the case may be.

There may be changes in circumstances which alter a Thermal Energy System's exemption status. Some examples are:

- Two or more Micro TES that were built and operated independently by the same person are subsequently combined for operational purposes, bringing the capital cost of the Micro TES above the threshold amount.
- A TES owned and operated by a strata that formerly exclusively served its own members, begins to sell thermal energy to customers who are not strata members.

In advance of a change of circumstance, a TES Provider is required to assess which regulatory stream is applicable to its TES and register or apply accordingly before proceeding.

Complaints Concerning Exempt TES

Upon receipt of a complaint relating to an Exempt TES, the scope of the Commission's review will be limited to whether the TES meets the criteria to qualify for an exemption or whether the TES should be characterized as a Stream A or Stream B TES. The Commission will review whether the capital cost of the TES is, or likely is, greater than the maximum threshold for a Micro TES or the TES is owned by a Strata Corporation and is providing energy exclusively to its Strata Unit Owners. If that does appear to be the case, the Commission may take further action, such as requiring registration of the TES and further review of rates and contracts. The owner of the TES should be prepared to provide evidence concerning the costs, ownership of and/or the customers of the TES.

Accordingly, upon receiving a complaint concerning an exempt TES, any investigation the Commission may undertake will be limited to what is required to determine whether the TES meets the requirements for exemption. For this reason, sections 42, 43 and 44 of the UCA, which deal with a public utility's duty to obey Commission orders and to keep and provide information that the Commission requests, applies to exempt TES. **If, as a result of an investigation, the Commission determines that a TES does not meet the requirements for exemption, the customer's complaint will be investigated further.**

As per the Commission Complaint Guidelines (<http://www.bcuc.com/Complaint.aspx>), a complainant must submit evidence that supports their allegations.

Stream A TES

Stream A TES Characteristics

The following types of TES are considered by the Commission to be a Stream A Thermal Energy System:

- Any On-Site TES with the characteristics described in Table 1; and
- Any TES that does not meet the requirements of an Exempt TES or any TES without a CPCN or a CPCN exemption that has an in-service date prior to August 28, 2014.

Table 1 Stream A TES Characteristics

- | |
|--|
| <ol style="list-style-type: none">1. The thermal generation and distribution equipment and facilities are located on the same Site as the thermal load.2. The TES is designed to meet the energy demands of a specific Site (one or more customers or buildings).3. The Thermal Energy System serves one or more customers or buildings on a single Site but there are no shared or common thermal generation or distribution facilities beyond the boundaries of a single Site.4. There is no, or very limited, use of public rights of way or public streets.5. The TES provides thermal energy to an existing building(s) or to a new building(s) planned or approved under a municipal building permit process.6. The TES has an AACE Class 3 capital cost estimate of equal to or greater than \$500,000 and less than \$15 million. |
|--|

A person owning or operating a Stream A TES is exempt from CPCN requirements, regulation of rates and Long-Term Resource Planning (sections 44.1, 45-46 and 59-61 of the UCA) with respect to that Stream A TES. However, all other sections of the UCA apply.

The following examples are provided to further clarify what the Commission considers to be a Stream A TES:

Example 1:

In the case of two or more separate sites each of which has a TES, where those systems are not physically connected to each other, each site will be considered a separate TES. However, if the systems are related in some other way, the individual Stream A applications may be filed at the same time for convenience. This could be the case if, for example, there is a single customer such as a school district.

Example 2:

Two or more physically disconnected TES on a single site (single building permit), that are not physically connected to each other, will be considered a single TES (do not need to be physically connected).

Example 3:

Two or more separate sites where Stream A TES are physically connected where each TES is designed and maintained to meet the load for the site on which it is located. Each TES will be considered a separate Stream A TES (even though physically connected).

Example 4:

Two or more separate sites where Stream A TES are physically connected to another TES on a separate site and the TES at each site is NOT designed and maintained to meet the load for that site which it is located (i.e. thermal energy generation may be located at one site but dependant on sharing generation from another) will be considered to be a Stream B TES. In this example, the interconnection between two TES may occur after the in-service date. For example, a Stream A System could be approved and built in 2014 and in 2016, connected to a second TES on a separate site. If the second site TES is not designed to meet the load for that site (i.e. will share thermal energy generation with the original Stream A TES), then in that case a Stream B CPCN and rate approval application must be filed before the two systems can be interconnected. Please see section 2.4 for a further discussion of Stream B systems and CPCN applications.

Rates and Contracts for Stream A TES

A Stream A TES Provider must have a long-term contract(s) with its Customer(s) which set out the utility's fees/charges and terms of service. Given the TES Provider's ongoing obligation under the UCA to provide safe and reliable service, the Commission expects that the term of contract will be for as long as the Customer(s) continues to occupy the premises that are served by the Stream A TES.

The following are the minimum provisions that must be included in a long-term contract for Stream A TES in order to qualify for exemption(s) as a Stream A TES.

Attestation to these provisions must be included in the Stream A Registration Form

1. Schedule of all Fees and Charges for thermal energy service (shown as monthly, annual charges or sample bills at different energy consumption levels). Include the initial rate and any subsequent rate adjustments, if applicable.
2. Description of the minimum or maximum contract charges and/or volumes. If none exist, then this should be clearly stated.
3. Clear identification in dollar terms of any front-end or back-end Fees and Charges, and the term of applicability.
4. Clearly defined penalties/charges (if any) for early termination of contract. Clauses must clearly state what is to be paid at different stages of the contract life including any contract expiry/non-renewal fees or other such charges.
5. Description of the circumstances where disconnection of service may occur. Identify the parties and the required actions with reasonable notice in order for service reconnection to occur.
6. Identification of the energy services covered by the TES and the additional services/fees which are not covered under the TES Fees and Charges which will be at the Customers' own expense (e.g. electricity).
7. Telephone number or other means by which customers will be able to contact the utility, in the event of disputes and/or concerns with rates and services, but particularly regarding an emergency.
8. Description of facilities and trained personnel that will provide emergency response.
9. Information regarding complaint process to the Commission.

Because the Commission will not be reviewing rates or the contracts upon which those rates are based, any and all contracts that set out rates for Stream A TES must contain the following clause to inform parties of the role of the Commission:

The Customer acknowledges [TES Provider name] is a public utility as defined in the Utilities Commission Act (UCA). However, this Thermal Energy System has a limited exemption, granted by British Columbia Utilities Commission Order #, from direct oversight of rates. Accordingly, the British Columbia Utilities Commission has not reviewed this Agreement, nor has it approved the rates charged for thermal services. However, other provisions of the UCA apply, including the obligation to provide safe and reliable service. Any disputes between the Customer and the utility that are within the jurisdiction of the British Columbia Utilities Commission pursuant to the UCA, may be referred for determination to the British Columbia Utilities Commission.

Complaint Process for Stream A TES

Complaints can be brought forward by any customer of a Stream A TES Provider. Where the customer is a Strata Corporation, only the Strata Corporation may bring forward a complaint on behalf of the strata members (the Strata Unit Owners). Individual Strata Unit Owners who bring forward a complaint to the Commission will be directed to raise the issue with their Strata Corporation Council.

The Commission will receive complaints concerning the following rates or service issues related to Stream A Thermal Energy Systems:

- **Service:**
 - **Safety:** The operation of the TES has caused, or has the potential to cause, harm or injury to persons, or material damage that impairs the value, condition or function of property.
 - **Reliability:** The TES is performing, or has a high probability of performing, in an unreliable manner such that service is not dependable or consistent.
- **Rates:**
 - **Accordance with Regulatory Requirements:** The rates were not disclosed up-front for the full life of the contract or plainly stated, and/or the fees and charges are not available for public inspection on the TES Provider's company website or the location of business (as per section 4.2.1).
 - **Accordance with Contract:** The rates charged are not consistent with the long-term contract(s) for service or disclosure statement(s).

With regard to complaints concerning rates, the Commission will not consider the propriety of rates that the TES Provider is charging as long as the rate is in accordance with a long-term contract.

Customers wishing to file a complaint are directed to view the Commission's Complaint Guidelines (found at <http://www.bcuc.com/Complaint.aspx>). As per the Complaint Guidelines, customers are encouraged to bring their complaint directly to their TES Provider first, to give them an opportunity to resolve the customer's issues or concerns before involving the Commission. A complaint to the Commission will only be considered if other forms of resolution are unsuccessful. As per the Complaint Guidelines, a complainant must submit evidence that supports their allegations.

Upon receiving a complaint about a TES Provider's rates or service, the Commission will review the complaint and the evidence submitted by the complainant in support of the complaint. If the Commission accepts the complaint, the Commission will provide the TES Provider an opportunity to resolve the complaint or respond with their own evidence. The Commission may ask the TES Provider to provide specific information and will consider all of the evidence in assessing the complaint.

If warranted, the Commission will initiate a more fulsome regulatory review, and may escalate the complaint to an adjudication process. Escalated review or adjudication may result in the Commission exercising its authority under the UCA, including, but not limited to, lifting the exemptions provided at registration, setting rates or ordering the Stream A TES Provider to improve service.

The onus is on the Stream A TES Provider to ensure it complies with the Stream A TES requirements. A Stream A TES Provider must retain documentation or evidence that it has complied with the Stream A requirements in the case of a regulatory review initiated by complaint.

Registration Requirements for Stream A TES

As shown in Figure 3 below, all Stream A TES with an in-service date after August 28, 2014 must file the Registration Form found in Appendix A. The Commission will review the Registration for completeness. If further information is required by the Commission, the Applicant will be contacted. When a complete application is received, the Commission will either:

1. confirm by Order that the TES is registered as a Stream A TES; or
2. notify the Applicant to reapply as a Stream B TES, as per section 2.4.

If further information is required by the Commission, the Applicant will be contacted.

Once a TES is confirmed by the Commission to be a Stream A TES, the Commission will issue an Order to exempt the registrant from CPCN requirements, Rate Regulation and the requirement to file a Long-Term Resource Plan with respect to the registered Stream A System.

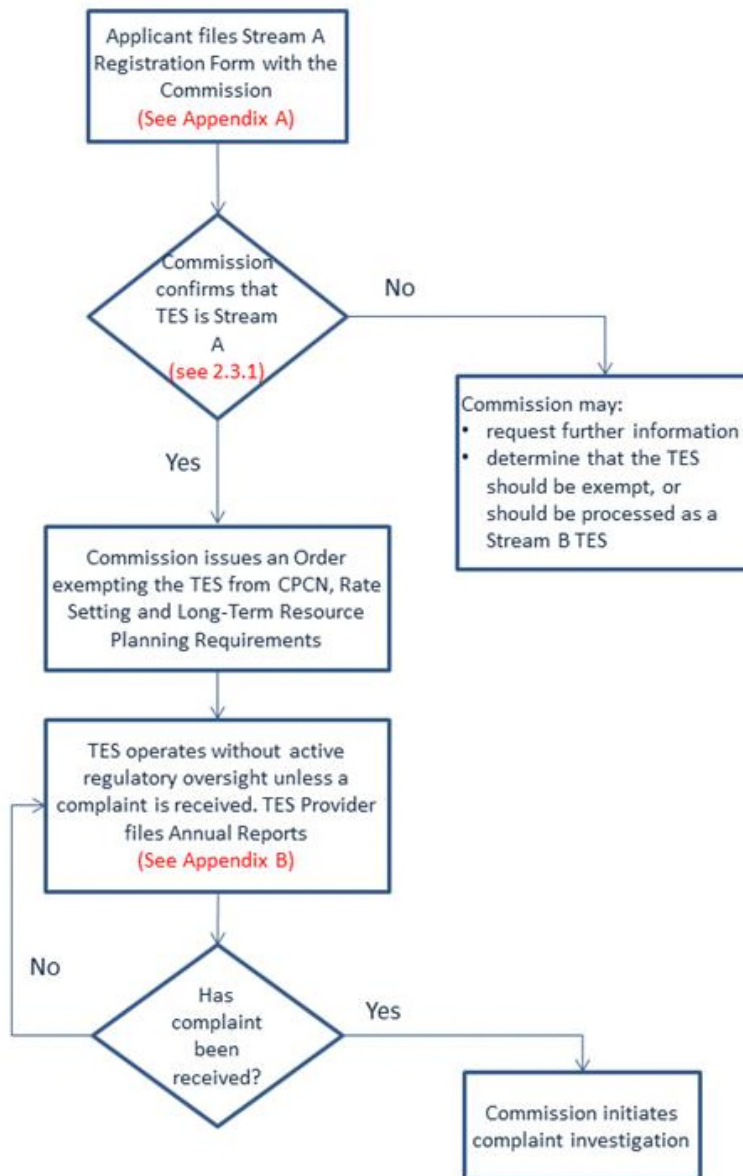
Applications that do not require further information are expected to be processed and an Order issued in as few as two weeks from receipt of the Application.

The Applicant must retain all background material related to the contents of the registration, for inspection and/or verification by the Commission, for as long as the TES is operational. It is important for the Applicant to ensure the information is clear, accurate and complete for the most efficient processing.

Prior to any transfer of ownership of a Stream A TES, an application must be made to the Commission for approval pursuant to section 52 of the UCA. The owner must provide the new owner with copies of the background material and the new owner must ensure they maintain that

material. Appendix D sets out the information the new owner is required to provide to the Commission. Please contact the Commission Secretary if further information is required.

Figure 3: Stream A TES Operating After August 28, 2014



Extensions to Stream A TES

TES Providers must notify the Commission of any extension to a Stream A TES. An extension is any capital investment that is intended to increase the capacity of the TES. Provided the sum of the proposed extension and the initial system (plus any previous extensions) does not exceed \$15 million, notification by way of a Stream A Application is sufficient. The Applicant should ensure that the Stream A Extension Application clearly identifies only those areas of the Thermal Energy System that the Applicant proposes to change.

If the sum of the proposed extension and the initial system, plus the cost of any previous extensions exceeds \$15 million, the TES is considered a Stream B TES and a CPCN Application will be required. A CPCN application may also be required if an extension results in service to customers on a site different to the site on which the TES is located. Please see section 2.4.2 for more information on Stream B CPCN requirements.

Annual Reporting Requirements for Stream A TES

All Stream A TES Providers must submit to the Commission an Annual Report in accordance with the template attached as Appendix B to these Guidelines on or before February 15 of the most recent calendar year.

Information in this report is used for the Commission's Annual Report to the Legislature and in the assessment of the annual levy (see section 3). Both the Commission's Annual Report and the Commission Order that assesses the levy are public documents. Accordingly, the information provided in the Annual Report will not be held confidentially.

Stream B TES

A TES that does not meet the requirements for an exemption and does not meet the Stream A characteristics described in section 2.3.1 is by default considered a Stream B TES.

Stream B Regulatory Process

All Stream B TES Applicants must file a CPCN and Rates Application with the Commission. The CPCN and Rates Application may be filed simultaneously, or the Rates Application may be filed at a later date but not later than a customer is charged a fee for service. Construction of the TES cannot start until a CPCN is issued by the Commission. Upon determining that the Applicant's TES is to be considered under Stream B regulation, it is the Commission's sole discretion the process by which an Application will be reviewed.

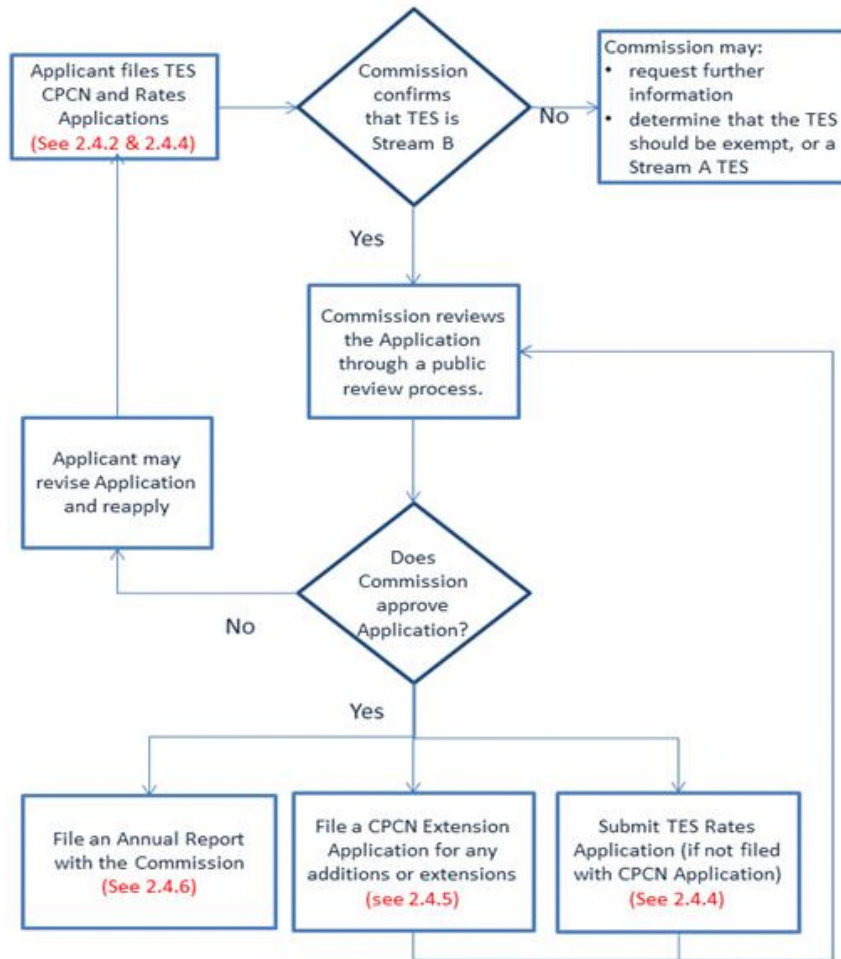
After receiving approval for a CPCN authorizing the Applicant to construct and/or operate a Stream B TES, the TES Provider must:

1. File a TES Rates Application if it has not done so, according to the Guidelines set out in section 2.4.4. The Rates Application must include a Tariff^[7] which outlines the schedule of proposed rates/fees and terms and conditions for all Customers. The TES Provider may not charge the customer a rate before it has filed the Rates Application for approval.
2. Submit an Annual Report within four months of each fiscal year according to the Guidelines set out in section 2.4.6.

Stream B TES Providers must file a TES Rates amendment Application in the event that it proposes to change the rate.

Figure 4 below illustrates the Regulatory Review Process for Stream B TES:

Figure 4: Stream B TES Operating After August 28, 2014



Stream B CPCN Application Requirements

The CPCN Guidelines can be found on the Commission website at: http://www.bcuc.com/Documents/Guidelines/2010/DOC_25326_G-50-10_2010-CPCN-Application-Guidelines.pdf

These Guidelines are intended to be as general as possible with respect to the information required. If an Applicant is of the view that any guideline(s) are not applicable, the Applicant must provide explanations why it is considered not applicable.

In addition to addressing the CPCN Guidelines, Applicants should also address the following:

- i. Evidence that the design energy capacity of the system has been appropriately determined and verified by a qualified person.
- ii. Anticipated construction build-out and TES operation schedule.
- iii. Load Analysis and Energy Demand Forecast for the Project:
 - a. description of methodology used to forecast peak load and energy demand including key inputs and assumptions;
 - b. forecast of floor area by building archetype (e.g., high rise, mid-rise, row house, retail, etc.) including data sources and assumptions;
 - c. map of the TES Provider's service territory for the Project with identification of buildings connected;
 - d. thermal energy end uses (e.g., space heat, domestic hot water, space cooling);
 - e. energy use intensities (EUIs) by thermal energy end use for peak load (W/m^2) and energy demand (kWh/m^2), including data sources and assumptions;

- f. summary table of development schedule by year and building archetype or building including total sales (MWh) and peak (MW) for each year of the development schedule; and
- g. future expansion of the Project that is contemplated. Provide specifications concerning the size and location of the potential expansion.
- iv. The amounts and sources of any contributions (developer), grants and other funding.
- v. Forecast and treatment of Capital Reserve Fund balances and impacts.
- vi. Annual operating budget specifying major cost components.
- vii. A description of emergency repair fund sourcing, size rational and access protocol.
- viii. A description of sustaining/replacement capital fund sourcing, size rational and access protocol.
- ix. Any additional fees or liabilities of any kind.
- x. Financial projections for various build-out scenarios to assess risk and required level of revenue requirements.
- xi. Identify and evaluate risk factors, explain who bears the risk, and what actions are available to mitigate these risks. Some examples of risk factors may include:
 - a. technology risk;
 - b. fuel cost and availability;
 - c. customer base;
 - d. property development risk;
 - e. developer/customer connection risk;
 - f. load forecast uncertainty; and
 - g. financial risk.

In the event of a transfer of ownership of a Stream B TES, an application must be made to the Commission pursuant to section 52 of the UCA and the new owner must ensure they obtain a CPCN prior to the acquisition.

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").

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 ^[8] 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.

A sample tariff and tariffs for all utilities are available for viewing at the Commission's office. For further information, please contact the Commission Secretary.

If the Applicant files a Rates Application subsequent to a CPCN approval, the following additional information is required:

- i. Name and address of Applicant;
- ii. Name and address of Project;
- iii. Commission Order granting a CPCN for the Project.

Extensions to a Stream B TES

Once a CPCN is granted for a Stream B TES, a new CPCN Application may be required if the TES Provider plans to construct or operate an extension to the TES. An extension is a capital addition to the system of a material dollar amount to provide additional capacity to meet increased demand. If the ratio of the capital costs of the planned extension to the initial capital cost of the TES, plus any previous extensions, exceeds one, a CPCN is required. A CPCN is also required if, as a result of the extension, rates for existing customers will increase by an amount greater than 10 percent. These criteria are summarized in the table below:

EXTENSION COST	CPCN REQUIREMENTS
$\frac{\text{Planned Extension Cost} + \text{Cost of Any Previous Extensions}}{\text{Initial TES Construction Cost}} > 1$ OR <i>Rate Impact as a result of Planned Extension > 10%</i>	CPCN REQUIRED
$\frac{\text{Planned Extension Cost} + \text{Cost of Any Previous Extensions}}{\text{Initial TES Construction Cost}} \leq 1$ AND <i>Rate Impact as a result of Planned Extension ≤ 10%</i>	CPCN NOT REQUIRED

In the event that a CPCN is not required, the TES Provider is required to file an application in the form set out in Appendix C.

A CPCN or the Stream A Application, as the case may be, must be granted prior to construction or operation of the extension. Please contact the Commission for further information if an extension is considered.

Annual Reporting Requirements for Stream B TES

Stream B TES Providers must file an Annual Report with the Commission **within four months of the TES Provider's fiscal year end**.

Although the Commission's annual reporting requirements may change from time to time, as of the date of this Guide, annual reporting requirements are set out in Commission Letters L-36-94 and L-14-95.

Complaint Process for Stream B TES

Customers wishing to file a complaint are directed to view the Commission's Complaint Guidelines (found at <http://www.bcuc.com/Complaint.aspx>) prior to filing a complaint. As per the Complaint Guidelines, customers are encouraged to bring their complaint directly to their TES Provider first, such that the TES Provider may have an opportunity to resolve the customer's issues or concerns before involving the Commission. A complaint to the Commission will only be considered if other forms of resolution are unsuccessful. As per the Complaint Guidelines, a complainant must submit evidence that supports their allegations.

TES Operating Prior to August 28, 2014

A TES that would not otherwise qualify for exemption as either a Micro TES or a Strata Corporation TES that was in-service before August 28, 2014, and for which no previous CPCN exemption was granted, must file a Stream A registration form with the Commission. Upon acceptance of

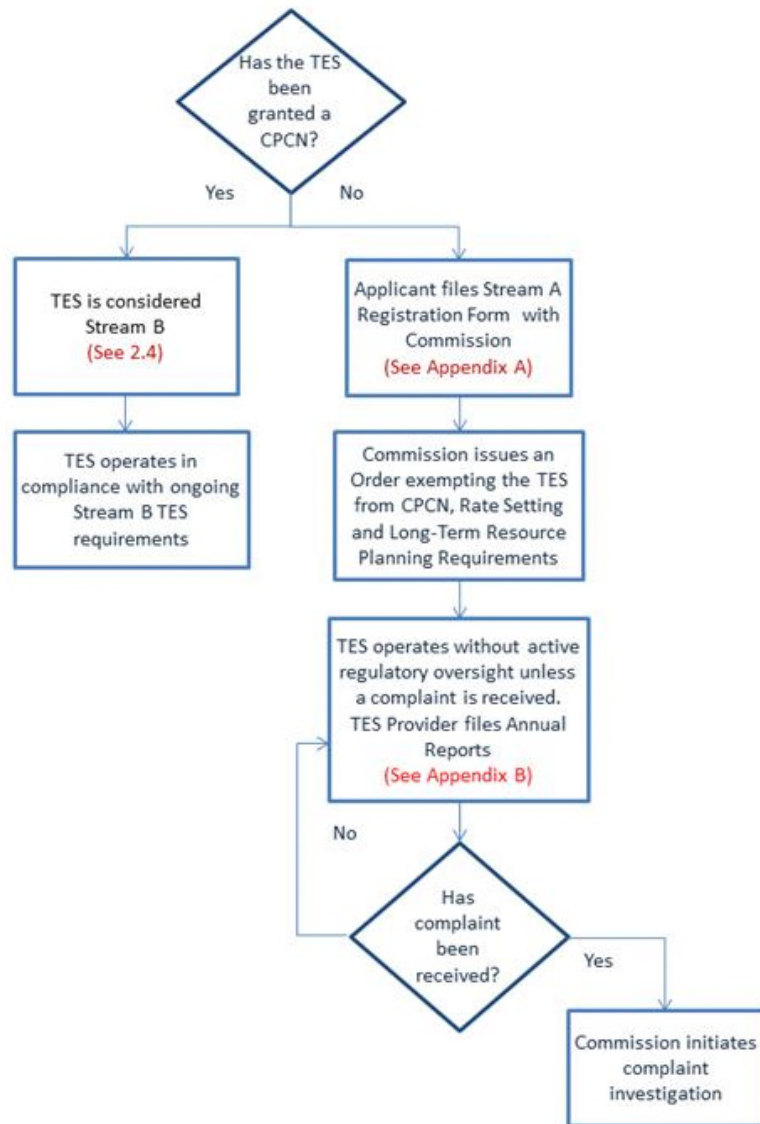
the Stream A registration, the Commission will issue an order granting the TES Stream A exemption status. Going forward, section 2.3 of the Guidelines will apply to this TES.

Any TES that has previously been granted a CPCN will continue to operate under that CPCN and should not re-register the TES under this TES Guide. From August 28, 2014 that TES will be subject to the regulatory requirements of a Stream B TES, regardless of the size of the TES. The TES Provider is required to comply with the ongoing requirements for Stream B systems outlined in the Guidelines.

Any TES Provider that has a CPCN approval but no rates have been approved is required to contact the Commission Secretary.

Figure 5 below illustrates the regulatory process for TES operating prior to August 28, 2014.

Figure 5: Stream A TES Operating Prior to August 28, 2014



Capital Reserve Provisions

Owners and/or operators of Stream A and Stream B Thermal Energy Systems must have sufficient capital reserve provisions in place to ensure its ability to replace equipment essential to maintaining safe and reliable thermal energy service. The need for replacement may arise in situations where equipment either fails to operate prior to its end of life or as it comes to the end of its planned useful life.

Service interruption mitigation in the event of equipment failure must be considered in the design and set-up of the TES. Back-up energy service, redundancy, rapid deployment of temporary backup energy service through insurance etc. are some of the options that the TES Provider must have considered.

All TES Providers are required to assess, on an ongoing basis, their capital reserve requirements and ensure they have sufficient capital reserve in place. The TES Provider may use a portfolio approach in applying the capital reserve provisions where a single TES Provider owns and/or operates multiple TES. Only one capital reserve is required for a TES, regardless of whether owner and the operator are the same or different entities.

An Applicant requesting approval of a Stream A Thermal Energy System is required to attest that it has sufficient capital reserve provisions and must also attest, in its annual report that it continues to maintain adequate capital reserve provisions. Stream B providers are required to provide information about its capital reserve for review during a CPCN Approval process.

The Commission may, at any time, initiate a further review of a TES Provider's capital reserve provisions.

Filing Documents with the Commission

Stream A Registrations and Stream B Applications must be made to the Commission Secretary. All documents are to be filed with the Commission Secretary in accordance with the Commission's document filing protocols available on the Commission's website at: www.bcuc.com.

Documents will be made public, except where special circumstances require confidentiality. If an Applicant requires an application or certain sections of an application to be kept confidential, it must apply to do so and provide adequate justification to the Commission. Please refer to the Confidential Filings Practice Directive, available on the Commission's website at: www.bcuc.com.

TES REGULATION LEVY AND COMMISSION COST RECOVERY

TES Levy

The Commission recovers a portion of the costs associated with specific proceedings directly from the TES Provider involved. Other hearing costs and all overhead expenses are recovered from all regulated utilities through a levy authorized by the UCA. The levy is apportioned among regulated utilities on the basis of energy sold in a calendar year.

For calendar 2013, the amount of the levy was \$0.012586 per GJ. The levy will be assessed on all Stream A and Stream B TES Providers. There will be no levy applied with respect to Exempt TES.

TES Providers will be also be assessed proceeding costs should a proceeding be required. A proceeding will typically be required for a Stream B CPCN Application and may be required as a result of a complaint against either a Stream A or a Stream B system. There are no additional fees assessed for a Stream A registration.

Depending on the outcome of the hearing of a complaint, the Commission may apportion the hearing costs between the TES Provider's owner/shareholders and the TES Provider's customer(s).

Collection of Information for the Levy

Currently, the Commission contacts all public utilities in February of each year to collect energy sales (\$), sales volumes and number of customers. This information is collected from TES Providers on a TES basis.

Beginning on August 28, 2014, this information will be collected from Stream A TES Providers through the Annual Report (see section 2.4.6 and Appendix B). Stream B Providers will be contacted annually by the Commission in February for this information.

Information concerning energy sales, sales volumes and number of customers is used for the Commission's own Annual Report to the Legislature in addition to the assessment of the annual levy. Both the Commission's Annual Report and the Commission Order that assesses the levy are public documents. Accordingly, the information will not be held confidentially.

APPENDIX A REGISTRATION FORM FOR "STREAM A" THERMAL ENERGY SYSTEMS (TES)

By filing this Registration Form with the Commission, the Applicant attests that all information provided is true, accurate and complete.

Stream A TES Providers must retain documentation or evidence in support of the information provided as it may be required for future potential reviews initiated by complaint or as required by the Commission.

Stream A TES - Registration Form

Applicant Information

Name of Applicant:	Company Name:
BC Business Registration No.:	Year Registered:

Full Address:	
Phone:	Email Contact:
Publicly or Privately held Business:	
Owner/CEO (name and address):	
Board Chair (name and address):	
Name of Parent Company if applicable and address:	
TES Specifics	
TES Location (address):	
Is this TES a: ☐ new construction ☐ retrofit ☐ purchase ☐ In service prior to 2014/08/24 ☐ Extension to an existing TES	In-Service date of the TES (YYYY/MM/DD):
Description of the construction phase-in or build-out period (in years):	
Service provided: ☐ space heating, ☐ cooling, ☐ domestic hot water	
Primary thermal energy sources:	Heating:
	Cooling (if applicable):
Energy conversion technology used:	
Buildings served: ☐ single, or ☐ multiple, how many?	Total square meters served:
Municipal Building Permit Number:	
Location of TES facilities and description of site size. Include map or schematic diagram if possible.	
Description of TES including energy centre and distribution system (drawing, diagram or description of equipment, connections etc.)	
Describe system size and known energy demand.	
Description of whether system and or site is designed to be scalable and <u>intended</u> to connect to other systems, buildings or locations.	
Description of back up or alternative services available. Including information of provider.	
Any other information on service/energy provided and the scope of services and facilities.	
Description of the use of municipal or public rights of ways.	
Name the customer(s) involved in the selection or signing of contracts.	
Number of customers/end-users: - Initially; - In 5 years	
Type of customers: (e.g.) - residential/commercial/office; - individual tenants/strata corporation	
Is (are) the Customer(s) obligated or restricted to taking service from the TES? If so, how and why.	
What percent of the estimated TES cost was/will be competitively tendered?	How else is cost reasonableness for construction of the facility assured?
Load Forecast and Analysis	

☐ I/We confirm that the load analysis and energy demand forecast was/will be completed by the following qualified person(s): [Company name and qualifications]

Information on peak loads (MW) and annual loads (MWh) by thermal energy end-use.

		Total
Peak Load (MW)	Heating	
	Cooling	
Annual Loads (MWh)	Heating	
	Cooling	

What is the method used to forecast the peak and annual loads? What are the key assumptions and design references used?

What is the peak design output (MW) of the TES (not including peaking/backup systems)?

What is the peak design output (MW) of the peaking/backup system?

Has the TES been designed to meet the full peak load for the site? If not, please explain other sources of peaking energy available to customers.

Cost Estimate

Estimated Capital Cost (AACE Class 3 minimum)
(Applicant may add additional line items as appropriate)

Category	\$, 000s						
Equipment							
Materials							
Engineering / Design							
Construction							
Financing							
Fees / Overhead							
Other 'soft' costs							
Total							

Describe methodology for estimating Overhead and Other 'soft' costs

Estimated Annual Operating Costs

Category	\$, 000s						
Labour							
Consumables							
Sustainment Capital							
Admin/Taxes / Overhead							
Insurance							
Other (specify)							
Total							

Describe methodology for estimating sustainment capital and operating Admin/Overhead.

If the system is being purchased, what is the purchase price?

Attestation Requirements for Stream A TES

Eligibility for Stream A TES Regulation:	☐ I/We certify that the proposed TES meets the description of an On-Site TES, as defined in the TES Regulatory Framework Guidelines. ☐ I/We certify that the proposed TES is associated with an approved single development/building permit. ☐ I/We certify that the proposed TES capital cost is \$15 million or less.
Customer Disclosure:	☐ I/We certify that all customers or potential customers have signed or will sign a long-term contract as described in the TES Regulatory Framework Guidelines. (Not required for TES an in-service date preceeding 2014/08/28). ☐ I/We certify that the long-term contract include the minimum provisions included in section 2.3.2 of the TES Regulatory Framework Guidelines. (Not required for TES an in-service date preceeding 2014/08/28). ☐ I/We have provided a “Plain-language” explanation to all customers/potential customers of the TES, which includes the minimum provisions included in section 2.3.2 of the TES Regulatory Framework Guidelines. (Not required for TES an in-service date preceeding 2014/08/28). ☐ I/We will retain all records of customer disclosure in the event of a dispute.
Other Requirements:	☐ I/We have determined the Capital Reserve Requirement and will hold sufficient Capital Reserves. ☐ I/We ensure the design, construction and operation of the TES selected is the most cost effective alternative. ☐ I/We will retain all records and provide an Annual Report to the Commission by February 15 of each year.

[Signing Officer]

APPENDIX B STREAM A ANNUAL REPORT GUIDELINES

Stream A TES– Annual Report							
Applicant Information							
Company Name:				BC Business Registration No.:			
Contact Name:				Contact Email:			
Contact Address:							
Contact Phone:							
Name of Parent Company, if applicable:				Jurisdiction of Incorporation:			
Energy Delivered							
Stream A Facility Name	# of Customers	Total Energy Delivered (GJ)					Sales (\$)
		Heating	Cooling	DHW	Other	Total	

APPENDIX C EXTENSION FORM FOR STREAM B TES

This Registration Form applies to system extensions planned for Stream B Thermal Energy Systems (TES) where the system extension capital cost, plus the capital cost of any previous extensions, is less than the initial capital cost of the Stream B TES.

By filing this Registration Form with the Commission, the Applicant attests that all information provided is true, accurate and complete.

**APPENDIX D
REQUIREMENTS UPON
TRANSFER OF TES
OWNERSHIP**

Attestations regarding Capital Reserve Provisions
☐ I/We have determined the Capital Reserve Requirement and I/We have sufficient Capital Reserve Provisions as required; ☐ I/We will continue to maintain all records in the event of a complaint and an audit by the Commission.
Demand Side Management
☐ I/We have taken demand-side measures during the period addressed by the report If demand side measures have been taken during the period addressed by this report, describe <i>the effectiveness of those measures</i> :
[Signing Officer]

Stream B TES – System Extension Form

Applicant Information							
Name of Applicant:		Company Name:					
CPCN Number for TES:							
TES Specifics							
TES Location (address):							
Is this extension for:		In-Service date of the TES (YY/MM/DD):					
☐ new distribution/new customers, ☐ expand or modify thermal energy generation, ☐ both							
Planned In-Service date of the extension (YY/MM/DD):							
Description of TES extension including energy centre and distribution system (drawing, diagram or description of equipment, connections etc., thermal energy supply and demand before and after the planned extension)							
Cost Estimate							
Estimated Capital Cost of the TES extension (AACE Class 3 minimum) (Applicant may add additional line items as appropriate)	Category	\$, 000s					
	Equipment						
	Materials						
	Engineering / Design						
	Construction						
	Financing						
	Fees / Overhead						
	Other 'soft' costs						
	Total						
Calculated ratio of TES extension capital cost (plus any previous extension capital)/initial TES capital cost.		(Must be less than 1.0 to use this Form. If greater than 1.0 a CPCN application is required.)					

Does the TES Provider have a system extension policy? If so, please attach.	
Rate Impacts	
Please provide the impact to current rates including calculations and schedule showing current rates and forecast rates over time resulting from the proposed extension. Include a schedule of any deferral accounts that may be used as rate mitigation.	(Must be less than a 10% aggregate increase to use this form. If greater than 10% increase, a CPCN application is required.) When will the TES Provider file an updated rates application?
New Owner Attestation Requirements	
Eligibility for Stream A TES Regulation:	☐ I/We certify that the proposed TES meets the description of an On-Site TES, as defined in the TES Regulatory Framework Guidelines. ☐ I/We certify that the proposed TES is associated with an approved single development/building permit. ☐ I/We certify that the proposed TES capital cost is \$15 million or less.
Customer Disclosure:	☐ I/We certify that all customers or potential customers have signed or will sign a long-term contract as described in the TES Regulatory Framework Guidelines. ☐ I/We certify that the long-term contract include the minimum provisions included in section 2.3.2 of the TES Regulatory Framework Guidelines. ☐ I/We have provided a “plain-language” explanation to all customers/potential customers of the TES, which includes the minimum provisions included in section 2.3.2 of the TES Regulatory Framework Guidelines. ☐ I/We will retain all records of customer disclosure in the event of a dispute.
Other Requirements:	☐ I/We have determined the Capital Reserve Requirement and will hold sufficient Capital Reserves. ☐ I/We will retain all records and provide an Annual Report to the Commission by February 15 of each year.

- [2] Please refer to the definition of public utility in the UCA for a complete description of those that are specifically not included and therefore excluded from the definition of public utility. If a TES Provider is unsure if it is excluded from the definition of a public utility, it should contact the Commission Secretary (information on inside cover page of this Guide) and/or seek legal advice.
- [3] Given the definition of geothermal resource, most TES Providers utilizing ground source heat are not engaged in the production of a geothermal resource as defined in the *Geothermal Resources Act* due to the low temperatures involved in ground source heat exchange.
- [4] As defined by the *Strata Property Act [SBC 1998]*.
- [5] Sections 45 and 46 of the UCA address CPCNs.
- [6] A Strata Unit Owner is an owner of a unit that is part of a Strata Corporation.
- [7] A Tariff is a rate schedule, schedule of fees, terms and conditions, and definitions for the charging of rates that is approved by the Commission.
- [8] A regulated Cost of Service rate-setting mechanism is a model that determines prices based on the costs of serving different customers and generally includes a regulated rate of return, which is deemed to be the fair return on investment.