



**BRITISH COLUMBIA  
UTILITIES COMMISSION**

**ORDER  
NUMBER G-84-15**

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

and

Corix Multi-Utility Services Inc.  
Final Rate Application for Phase 1 – Wesbrook of the  
University of British Columbia Neighbourhood District Energy System

**BEFORE:** C. A. Brown, Panel Chair/Commissioner May 25, 2015

**O R D E R**

**WHEREAS:**

- A. On August 8, 2014, Corix Multi-Utility Services Inc. (Corix) applied to the British Columbia Utilities Commission (Commission) for:
1. A Certificate of Public Convenience and Necessity (CPCN) under sections 45 and 46 of the *Utilities Commission Act* (UCA) to construct and operate Phase 1 of the proposed community-based district energy system at the University of British Columbia (UBC) (Project);
  2. Approval under section 45 of the UCA of the Infrastructure Agreement between Corix and UBC including endorsement of the proposed project plan; and
  3. Approval under sections 59 to 61 of the UCA for indicative revenue requirements, rate design and rates (CPCN Application);
- B. In the CPCN Application, Phase 1 of the Project included new buildings in Wesbrook Place that are scheduled for completion between 2015 and 2023 (Phase 1 – Wesbrook), and Acadia East and Block F buildings to be built between 2020 and 2023. However, during the Streamlined Review Process held on October 30, 2014, Corix removed Acadia East and Block F from the CPCN Application (Revised CPCN Application);
- C. On December 12, 2014, by Order C-11-14A, the Commission granted a CPCN to Corix for Phase 1 – Wesbrook subject to Corix filing an executed revised Infrastructure Agreement within 60 days of the date of the order. The Commission did not approve the indicative revenue requirements, rate design and rates as

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applied for; however, the Commission stated that it will approve, subject to Corix filing a revised revenue requirements, rate design and rates application, a 20-year levelized rate design based solely on the Phase 1 – Wesbrook revenues and costs;

- D. On February 10, 2015, Corix filed a rate application for Phase 1 – Wesbrook pursuant to the Commission directives outlined in Order C-11-14A, which includes revenue requirements, rate design and final rates (Final Rates Application);
- E. On February 11, 2015, Corix filed an amended and restated Infrastructure Agreement;
- F. On February 18, 2015, Corix filed an addendum to the Final Rates Application that specifically outlines the approvals sought in the Final Rates Application pursuant to sections 59 to 61 of the UCA. These approvals are as follows:
  - 1. The rate base for Phase - 1 Wesbrook;
  - 2. The revenue requirement for Phase 1 - Wesbrook, which includes:
    - i. A deemed capital structure of 57.5 percent debt and 42.5 percent equity;
    - ii. Long term debt financing costs estimated at 4.0 percent;
    - iii. A return on equity of 9.5 percent;
    - iv. Operating costs; and
    - v. The proposed 20-year levelized rate structure through which a portion of the annual revenue requirements is deferred in the early stages of development;
  - 3. The rate design and schedule of residential rates;
  - 4. The accounting treatment of the revenue deficiency deferral account;
  - 5. Approval to capitalize and amortize Corix's and UBC's project development costs over 30 years and to have these costs included in rates;
  - 6. Approval of Corix's categorization of controllable and non-controllable costs;
- G. Pursuant to Order G-24-15 dated February 19, 2015, the Commission established a regulatory timetable for review of the Final Rates Application, which included one round of information requests and written submissions;
- H. No interveners registered in the proceeding;
- I. On March 10, 2015, the Commission issued Order C-2-15 approving the CPCN for Phase 1 – Wesbrook. In Order C-2-15, the Commission also approved Corix's Amended and Restated Infrastructure Agreement, but only those components that relate solely to the CPCN for Phase 1 – Wesbrook and not those components that address Phase 2 of the Project or rate matters; and

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J. The Commission has reviewed the Final Rates Application and evidence filed in the proceeding.

**NOW THEREFORE**, pursuant to sections 59-61 of the *Utilities Commission Act* and for the reasons attached as Appendix A to this order, the British Columbia Utilities Commission orders as follows:

1. Corix is directed to exclude the University of British Columbia's 2014 project development costs totalling \$298,277 from rate base and is denied approval to recover these costs from ratepayers. Corix is approved to capitalize \$1.216 million of project development costs for recovery from ratepayers and is approved to amortize these costs into rates over a 30-year period.
2. The rate base for Phase 1 – Wesbrook is approved, subject to the adjustment to the project development costs outlined in Directive 1 of this order.
3. The 20-year levelized rate structure for Phase 1 – Wesbrook, through which a portion of the annual revenue requirements is deferred in the early stages of development, is approved.
4. The following components of the revenue requirement for Phase 1 – Wesbrook, as outlined in the Final Rates Application, are approved:
  - a. A deemed capital structure of 57.5 percent debt and 42.5 percent equity;
  - b. Long term debt financing costs estimated at 4.0 percent;
  - c. A return on equity of 9.5 percent;
  - d. Operating costs;
5. The accounting treatment of the revenue deficiency deferral account is approved.
6. Corix's categorization of controllable and non-controllable costs, as outlined in the Final Rates Application, is approved.
7. Corix's proposed rate design and schedule of residential rates is approved, subject to any changes to the residential rate schedule which may arise as a result of the adjustment to the project development costs as outlined in Directive 1 of this order.
8. Corix is directed to recalculate the levelized rate based on the adjustment to project development costs as outlined in Directive 1 of this order. Corix must file with the Commission the revised levelized rate and the residential rate schedule for Phase 1 – Wesbrook by June 17, 2015.

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9. Corix is directed to file a report to the Commission showing the balance of the revenue deficiency deferral account and the supporting calculations by December 31 of every year.

**DATED** at the City of Vancouver, in the Province of British Columbia, this        25<sup>th</sup>        day of May 2015.

BY ORDER

*Original signed by:*

C. A. Brown  
Commissioner

Attachment

An Application by Corix Multi-Utility Services Inc.  
Final Rate Application for Phase 1 – Wesbrook of the  
University of British Columbia Neighbourhood District Energy System

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**REASONS FOR DECISION**

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**1.0 BACKGROUND**

On August 8, 2014, Corix Multi-Utility Services Inc. (Corix) filed an application with the British Columbia Utilities Commission (Commission) for a Certificate of Public Convenience and Necessity (CPCN) under sections 45 and 46 of the *Utilities Commission Act* (UCA) to construct and operate the Neighbourhood District Energy System (NDES) to serve new developments at the University of British Columbia (UBC). Additionally, Corix sought approval of the Infrastructure Agreement between Corix and UBC, as Corix and UBC consider that the Infrastructure Agreement falls within the broad language of section 45(7) of the UCA. Corix also sought approval under sections 59 to 61 of the UCA of the proposed methodology for establishing revenue requirements, rate design and rates (CPCN Application).

In the CPCN Application, Corix described the project in two phases, with the first phase comprising three distinct areas: Wesbrook, Acadia and Block F. Corix stated that the proposed energy source for Phase 1 is a temporary gas fired boiler system and that Phase 2 is contemplated to begin in 2024 when thermal load can support the installation of a renewable energy source. Corix estimated a total project capital cost for Phase 1 and Phase 2 of \$68 million, though the approval sought in the CPCN Application was limited to Phase 1.

During the CPCN proceeding, Corix amended the CPCN Application to include approval for only the Wesbrook portion of Phase 1 (Phase 1 – Wesbrook). Corix also provided a revised total capital cost for Phase 1 – Wesbrook of \$11,193,073 in real 2014 dollars.

On December 12, 2014, by Order C-11-14A, the Commission granted a CPCN to Corix for Phase 1 – Wesbrook subject to Corix filing an executed revised Infrastructure Agreement within 60 days of the date of the order. The Commission did not approve the indicative revenue requirements, rate design and rates as applied for; however, the Commission stated that it will approve, subject to Corix filing a revised revenue requirements, rate design and rates application, a 20-year levelized rate design based solely on the Phase 1 – Wesbrook revenues and costs.

On February 10, 2015, Corix filed a rate application for Phase 1 – Wesbrook pursuant to the Commission directives outlined in Order C-11-14A (Final Rates Application). Further, on February 11, 2015, Corix filed an amended and restated Infrastructure Agreement. The Commission issued Order C-2-15 on March 10, 2015, approving the CPCN for Phase 1 – Wesbrook. In Order C-2-15, the Commission also approved the amended and restated Infrastructure Agreement, but only those components that relate solely to the CPCN for Phase 1 – Wesbrook and not the components that address Phase 2 of the project or rate matters.

**2.0 APPROVALS SOUGHT**

As part of the Final Rates Application, Corix seeks the following approvals pursuant to sections 59 to 61 of the UCA:

1. The rate base for Phase 1 – Wesbrook;

2. A 20-year levelized rate structure through which a portion of the annual revenue requirements is deferred in the early stages of development;
3. The revenue requirements for Phase 1 – Wesbrook, including:
  - a. A deemed capital structure of 57.5 percent debt and 42.5 percent equity;
  - b. Long-term debt financing costs estimated at 4 percent;
  - c. A return on equity of 9.5 percent;
  - d. Operating costs;
4. The accounting treatment of the revenue deficiency deferral account;
5. The rate design and schedule of residential rates;
6. Approval to capitalize both Corix's and UBC's project development costs and to amortize these costs over 30 years for recovery in rates; and
7. Approval of Corix's categorization of controllable and non-controllable costs.

### 3.0 ISSUES ARISING

Upon review of the Final Rates Application and the evidence filed in this proceeding, the Panel identifies two issues that require further discussion and/or determinations: the amount of project development costs proposed to be recovered from ratepayers; and Corix's request for approval to set rates for a 20-year period.

#### 3.1 Project development costs

Pursuant to Order C-11-14A, the Commission approved in principle the capitalization of both Corix and UBC-incurred project development costs for recovery in rates and to amortize the project development costs over 30 years. However, the Commission stated that it "makes no determination at this time on the amount of project development costs approved for recovery in rates" [emphasis added] and directed Corix to file for final approval of these costs in the Final Rate Application.

At the close of the evidentiary record for the CPCN proceeding, Corix estimated project development costs to be \$987,000.<sup>1</sup> Of this total, approximately 60 percent were UBC-incurred costs.<sup>2</sup> In response to BCUC Information Request (IR) 15.1, Corix stated the following: "Corix does not have a complete estimate of aggregate project development costs that will be incurred by UBC and Corix prior to construction. However, it is reasonable that aggregate project development costs to be included in rate base will exceed the \$880,000 [later updated to \$987,000 in the IR responses] assumed in the [CPCN] Application."<sup>3</sup>

Corix stated in the CPCN Application that project development costs were approximately 1.5 percent of total project capital costs; however, this was based on the estimated project cost for the entire project (i.e., Phase 1 and Phase 2) of \$68 million.<sup>4</sup> Corix later revised its CPCN Application to include only project capital costs related to Phase 1 – Wesbrook. Accordingly, the capital cost approved in real 2014 dollars pursuant to Order C-11-14A was \$11,193,073. This approved capital cost includes contingency but excludes project development costs.<sup>5</sup>

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<sup>1</sup> Corix Phase 1 UBC NDES CPCN Proceeding (CPCN Proceeding), Exhibit B-6, BCUC IR 15.1, Attachment H.

<sup>2</sup> Ibid.

<sup>3</sup> CPCN Proceeding, Exhibit B-6, BCUC IR 15.1.

<sup>4</sup> CPCN Proceeding, Exhibit B-1-1, Table 7, p. 23.

<sup>5</sup> Corix CPCN Phase 1 UBC NDES Decision (CPCN Decision), Table 1, p. 10.

The Final Rates Application contains two notable changes to the Phase 1 – Wesbrook project capital costs compared to the costs presented in the CPCN proceeding:

1. The project capital cost now includes project management costs of \$732,000, which are estimated at 6 percent of the project capital cost and increase the overall project capital cost to \$11,925,024.<sup>6</sup>
2. Project development costs increased from \$987,000 to \$1.285 million.<sup>7</sup> These costs have since been further increased to \$1.514 million as described in Corix’s responses to BCUC IRs. Corix states in response to BCUC IR 9.2 that the impact of the additional costs compared to the amount provided in the Final Rates Application is that the levelized cost per megawatt hour has increased by 0.7 percent.<sup>8</sup>

The following table provides a breakdown of project development costs incurred by each of Corix and UBC by cost category:<sup>9</sup>

**Table 1: Project development cost breakdown**

Cost Category	UBC (\$)	Corix (\$)
Pre-feasibility	51,075	0
Feasibility	181,945	161,483
Engineering	72,607	340,651
Legal	381,451	108,530
Regulatory	0	196,726
Proponent negotiation and selection support	107,288	0
Less: BC Hydro funding	(87,300)	
<b>TOTAL</b>	<b>\$707,066</b>	<b>\$807,390</b>

When asked in BCUC IR 17.2 in the CPCN proceeding why it is appropriate to recover UBC-incurred costs from ratepayers, Corix responded as follows:

UBC’s initial planning and development of the UBC NDES project began prior to Corix being selected as the preferred utility partner. This included pre-feasibility and feasibility studies upon which Corix conducted the due diligence to finalize the business case. Pre-feasibility and feasibility studies are part of normal project development costs and would have been included in Corix’s project development costs had UBC elected to pursue a third party provider earlier in the process.

As described in the CPCN Application, UBC commissioned the pre-feasibility study in 2011 and then subsequently commissioned a full feasibility study. Based on the result of the full feasibility study on February 25, 2013, UBC issued a Request for Information (RFI) to identify a utility partner to complete due diligence and to implement the NDES. In August 2013, Corix was selected as the utility partner and awarded the project.<sup>10</sup>

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<sup>6</sup> Exhibit B-1, Table 6, p. 17.

<sup>7</sup> Exhibit B-1, Table 12, p. 27.

<sup>8</sup> Exhibit B-2, BCUC IR 9.2.

<sup>9</sup> Exhibit B-2, Attachment to BCUC IR 9.2.

<sup>10</sup> CPCN Proceeding, Exhibit B-1-1, p. 7.

As shown in Table 1 above, the majority of UBC's project development costs relate to legal costs and to proponent negotiation and selection support costs. Further, UBC incurred a large portion of these costs after the selection of Corix as the utility partner for the NDES. The total project development costs incurred by UBC in 2014 are \$298,277, and are broken down as follows: legal costs of \$294,260; proponent negotiation and selection support costs of \$71,317; less BC Hydro funding of \$67,300.<sup>11</sup>

Corix provides the following description of UBC's legal costs incurred in 2014:

UBC is not a regulated utility and has not, previously, entered into an arrangement for the use of its land for delivering regulated thermal energy utilities to residents on its Vancouver (or any other) campus. Due to UBC's unique land use development and regulatory environment, considerable internal legal resources were engaged. UBC also required external legal counsel specializing in regulated utilities in B.C. to provide advice on the legal structure of the engagement, and for the structuring, drafting, review and finalization of the definitive agreements between UBC and Corix.<sup>12</sup>

UBC's legal costs are broken down by year and with accompanying descriptions in response to BCUC IR 9.9, including the following statement: "Corix is an experienced utility employing specialized legal counsel. Operating or negotiating for the development and operation of regulated utility projects is outside the normal business of a university. Therefore, to ensure that its interest[s] were protected, UBC retained external counsel specializing in regulated utilities."<sup>13</sup>

Corix states that it was able to reduce its own legal costs as a result of UBC providing legal support through collaborative drafting work in creation of the NDES agreements, including the initial Memorandum of Understanding and interparty Term Sheet, as well as the Infrastructure Agreement. Corix also states that advice and input from the UBC legal team was required for reviewing and developing responses to the Commission and intervener questions as part of the CPCN proceeding.<sup>14</sup>

In percentage terms, when factoring in project developments costs to the project capital cost of \$11,925,024, project development costs represent 11.3 percent of the Phase 1 – Wesbrook capital cost.

In comparison, the project development costs for phase 1 of Corix's Simon Fraser University (SFU) UniverCity District Energy System (DES) project were 3 percent of phase 1 capital costs. Corix states that "no development costs were allocated for work undertaken by the SFU Trust, however the approach taken by UBC in developing the concept for the NDES differed significantly from that of UniverCity."<sup>15</sup>

Corix further states, "UBC's development costs cannot be assessed in isolation of other elements of establishing the NDES...It is important to note that UBC has foregone any franchise fee for the first 15 years of operation...Corix notes that no relief in franchise fee was provided at UniverCity."<sup>16</sup>

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<sup>11</sup> Exhibit B-2, Attachment to BCUC IR 9.2.

<sup>12</sup> Exhibit B-2, BCUC IR 9.3.

<sup>13</sup> Exhibit B-2, BCUC IR 9.9.

<sup>14</sup> Exhibit B-2, BCUC IR 9.10.

<sup>15</sup> Exhibit B-2, BCUC IR 9.8(iii) and 9.8(iv).

<sup>16</sup> Exhibit B-2, BCUC IR 9.9.



## Commission determination

**The Panel directs Corix to exclude the UBC 2014 project development costs of \$298,277 from rate base. Accordingly, the Panel approves the capitalization of approximately \$1.216 million of project development costs and approves the amortization of these costs into rates over a 30-year period.**

The Panel finds that the project development costs of 11.3 percent of the total project costs for Phase 1 – Wesbrook as applied for are significantly higher than project development costs from similar projects. The Panel notes that the project development costs for the SFU UniverCity DES were approximately 3 percent of that project’s phase 1 capital costs. The proportion of project development costs to total project costs is generally considered a key indicator to measure efficiency; thus project development costs of 11.3 percent of the total project cost raises concerns.

In reviewing the evidence to understand the justification for such a disproportionate project development to total project cost ratio, the Panel notes that there are several issues:

- The UBC legal costs are significant;
- UBC, at the point of selecting Corix, is a developer, not the utility. While it appears that there may be an overlap in roles in 2013 due to the timing of the selection process, Corix was the utility in 2014;
- The Panel is not persuaded that these costs benefit the NDES ratepayers and ought to be recovered from these customers; and
- The Panel is concerned that the UBC legal costs represent a duplication of effort.

The Panel acknowledges Corix’s submissions that UBC has unique circumstances, given the trust obligations UBC must discharge. The Panel respects UBC’s due diligence; however, the Panel also respects that rates must be just and reasonable to the ratepayer, and notes that as a developer, UBC ought to find a way to recover these costs in that context. Generally, developers do not seek to add their development costs to rate base; developers seek a return on their investment when selling, leasing or otherwise discharging their property. Based on the evidence provided in the proceeding, it appears that there may be a duplication of effort among Corix and UBC, which has resulted in higher than expected costs, particularly with regards to the legal costs incurred in support of the CPCN review process. While UBC’s active participation in the CPCN proceeding may have contributed positively to the regulatory process, it also appears to the Panel that UBC’s involvement has served other purposes related to protecting its own interests and therefore, it is not appropriate for those costs to be recovered from ratepayers of the NDES.

### **3.2 20-year levelized rate approval**

Corix requests approval of a 20-year levelized rate structure that allows for a portion of the annual revenue requirement to be deferred in the early stages of the NDES development in order to provide affordable rates for customers. The deferred portion of the revenue requirement is captured annually in the revenue deficiency deferral account (RDDA) with the expectation that the RDDA balance will be reduced to zero at the end of 20 years.

In the Final Rates Application, Corix proposes to establish an initial 2015 rate per megawatt hour (MWh) of \$98.58, which is then escalated by 2.9 percent per annum. Based on the forecast costs and revenues for

Phase 1 – Wesbrook, the levelized cost on a net present value basis over 30 years is \$133.73 per MWh.<sup>17</sup> However, as previously noted in section 3.1 of these reasons for decision, due to the increase in project development costs between the time of filing the Final Rates Application and the filing of Corix’s responses to BCUC IRs, Corix has increased the initial 2015 rate to \$99.38 per MWh, which increases the levelized cost per megawatt hour to \$134.68.<sup>18</sup>

Corix states the following on page 1 of the Final Rates Application: “It is the expectation of the Parties that, as contemplated in the Project Plan, beginning in year 2020 additional neighbourhoods and customers not included in the approved CPCN service territory will start to be attached to the NDES, subject to the required Commission approvals. The result is that while this rate application provides a forecast of revenue requirements and rates over a 30 year period, this application only depicts expected customer rates for the initial 5 year period.”<sup>19</sup> [emphasis added]

However, when asked to confirm in BCUC IR 1.1 that Corix is requesting approval to set rates for the initial five years only, Corix responded as follows:

Corix is requesting approval of the revenue requirements and rates over the 20 year period as set out in the rate application. However, it is the expectation of the Parties that after about 5 years residential development at UBC will begin to occur that is outside the area of the CPCN approved by the Commission. At the point when this happens, Corix will file an application with the Commission and we would anticipate as part of this application Corix would be applying for new rates as part of an expanded NDES proposal to serve these areas. Corix would also consider filing an application should the RDDA deviate significantly from what is forecast.<sup>20</sup>

### Commission determination

**The Panel approves a 20-year levelized rate structure, as requested. However, the Panel directs Corix to recalculate the levelized rate and residential rate schedule based on the adjustments to project development costs directed in section 3.1 of these reasons for decision. Corix must file the revised rates and residential rate schedule with the Commission by June 17, 2015.**

This levelized rate will be charged to all customers initially taking service in 2015 and may be reviewed from time to time by the Commission. The Panel recognizes that under a levelized rate design, there will be over-earning in the latter years that compensate for the under-earning in the early years of the project. **Accordingly, the Panel approves the establishment of the revenue deficiency deferral account in order to capture the revenue requirement variances contemplated under the levelized rate structure. The Panel directs Corix to file a report to the Commission showing the balance of the revenue deficiency deferral account and the supporting calculations by December 31 of every year.**

While the Commission in the CPCN Decision discussed the potential risk to ratepayers of Corix’s proposed levelized rate structure, this Panel is satisfied that the approach is consistent with the Commission’s general approach to “Greenfield” start-up utilities. The Panel finds that this approach is just and reasonable to customers and provides the utility an opportunity to earn a fair return on investment.

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<sup>17</sup> Exhibit B-1, p. 37.

<sup>18</sup> Exhibit B-2, BCUC IR 9.2.

<sup>19</sup> Exhibit B-1, p. 1.

<sup>20</sup> Exhibit B-2, BCUC IR 1.1.

#### **4.0 FURTHER DETERMINATIONS**

The Panel has reviewed the evidence and finds that the revenue requirements, rate design and rates, as described in the Application and summarized in Exhibit B-1-2 are just and reasonable, encourage the reduction of energy demand, encourage the utility to be efficient and are in the public interest. The specific approvals are outlined in the attached order, and are subject to the adjustments as directed within section 3 of these reasons for decision.