



ORDER NUMBER
G-150-25

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

and

Kelowna OWS Utility Inc.
Complaint filed by Strata EPS 7397

BEFORE:
B. A. Magnan, Panel Chair
W. M. Everett, KC, Commissioner

on June 18, 2025

ORDER

WHEREAS:

- A. On December 28, 2022, a complaint was filed on behalf of Strata EPS 7397 (Strata) regarding the thermal energy services the Strata receives from Kelowna OWS Utility Inc. (Kelowna OWS) (Complaint);
- B. Kelowna OWS provides thermal energy services, including space heating, cooling and domestic hot water, to the residents of the One Water Street Development in Kelowna, British Columbia. These residents are represented by the Strata;
- C. In the Complaint, the Strata submits that the thermal energy services provided by Kelowna OWS are unreliable and unsafe, in part due to the repeated failure of the heat pump components of Kelowna OWS' thermal energy system;
- D. On December 29, 2022, British Columbia Utilities Commission (BCUC) Staff initiated its complaint process to review the Complaint, which included issuing a request that Kelowna OWS respond to the Complaint, as well as responding to BCUC Staff questions regarding the Complaint;
- E. On May 5, 2023, the BCUC appointed a panel to review the reliability and safety of the thermal energy services provided by Kelowna OWS;
- F. By Orders G-176-23 and G-222-23, dated July 7, 2023, and August 18, 2023, respectively, the BCUC established and amended a regulatory timetable, which included two rounds of information requests (IRs) to Kelowna OWS and to the Strata, and an opportunity for both parties to reply to IR responses;
- G. By Order G-302-23, dated November 7, 2023, the BCUC directed Kelowna OWS to file a Third-Party Engineer Report no later than 90 days following the BCUC's approval of the terms of engagement for a proposed form of agreement for the retainer of a qualified and independent third-party engineer (Third-Party Engineer Retainer Agreement). The Third-Party Engineer Retainer Agreement is to include the terms of engagement necessary to investigate and provide a report in respect of the root cause(s) of the unreliable and

inadequate operation of the thermal energy space heating service provided to the Strata by Kelowna OWS' thermal energy system;

- H. On December 8, 2023, Kelowna OWS filed with the BCUC the Third-Party Engineer Retainer Agreement, which established four Focus Areas as the scope of work to be completed by Falcon Engineering Ltd. regarding the Complaint (i.e. Focus Areas 1, 2, 3 and 4);
- I. On March 12, April 29, June 25 and August 29, 2024, Kelowna OWS filed the Third-Party Engineer Reports for Focus Areas 1 to 4, respectively;
- J. The BCUC requested that Kelowna OWS provide a further update with respect to the status, next steps, anticipated completion and cost of correction for each of the 12 identified corrective actions in the Third-Party Engineering Report in respect of Focus Area 4. Kelowna OWS filed updates to the Third-Party Engineer Report for Focus Area 4 on December 12, 2024 and March 13, 2025; and
- K. The BCUC has considered the submissions filed to date in this proceeding and makes the following determination.

NOW THEREFORE for the reasons outlined in the decision accompanying this order, the BCUC orders that the Complaint is closed.

DATED at the City of Vancouver, in the Province of British Columbia, this 18th day of June 2025.

BY ORDER

Electronically signed by Bernard Magnan

B. A. Magnan
Commissioner

DECISION

Table of Contents

Page no.

Executive Summary	i
1.0 Introduction	1
1.1 Background	1
1.2 Complaint	1
1.3 Complaint Process for a Fixed-Scale TES (formerly known as Stream A TES)	2
2.0 BCUC Review of the Complaint	3
2.1 Initial Response to the Complaint	3
2.2 Panel appointed to review the Complaint	3
2.3 BCUC Orders Independent Investigation	4
3.0 Results of Third-Party Engineer Investigation	4
3.1 Focus Area 1 Engineering Report (March 12, 2024)	5
3.2 Focus Area 2 Engineering Report (April 29, 2024)	5
3.3 Focus Area 3 Engineering Report (June 25, 2024)	6
3.4 Focus Area 4 Engineering Report (August 29, 2024)	6
4.0 Performance of Kelowna OWS TES during 2023-24 Heating Season	6
5.0 Updates to Focus Area 4 Engineering Report	7
5.1 Update 1	7
5.2 Update 2	7
6.0 Panel Determination	8

Executive Summary

The residents of the One Water Street Development in Kelowna, BC (One Water Street), represented by the Strata Council of EPS 7397 (the Strata), filed a complaint with the British Columbia Utilities Commission (BCUC) on December 28, 2022, alleging that the space heating services it receives from Kelowna OWS Utility Inc. (Kelowna OWS) are unreliable and unsafe. The Strata alleged that multiple One Water Street residents have experienced outages in their space heating service for extended periods of time (Complaint).

On December 29, 2022, BCUC Staff initiated its complaint review process, which included issuing a request that Kelowna OWS respond to the Complaint, as well as to BCUC Staff questions regarding the Complaint. On May 5, 2023, a Panel was appointed to further conduct the BCUC's review of the Complaint. Following further information gathering, the BCUC found that the current state of Kelowna OWS' thermal energy system, and Kelowna OWS' ability to provide space heating service to the Strata, to be unreliable and inadequate. The BCUC directed Kelowna OWS to complete an independent engineering investigation to identify the root cause(s) of the equipment failures that have resulted in space heating outages for One Water Street residents. The scope of the independent engineering investigation comprised of four focus areas (Focus Areas 1-4), including a review of the current state of Kelowna OWS' system and a review of recommended corrective actions. Four engineering reports were filed with the BCUC; the final engineering report was filed on August 29, 2024.

The engineering reports identified corrective actions for Kelowna OWS to undertake, as well as the status, next steps, anticipated completion and cost of correction for each corrective action, wherever applicable. The BCUC directed Kelowna OWS to file further updates with respect to the progress towards completing each identified corrective action. The final update was received on March 13, 2025. This update indicated that the equipment failures have decreased, however it does not appear that the root cause(s) of the failures have been fully addressed.

The Panel is satisfied with the progress Kelowna OWS has made towards remedying its unreliable and inadequate provision of space heating to the residents of One Water Street. Accordingly, the Panel determined that it is appropriate to conclude its review of the Complaint at this time. Despite the current closure of the Complaint, the BCUC will continue its general oversight of Kelowna OWS and its operations regarding safe and reliable service.

1.0 Introduction

1.1 Background

The One Water Street Development (One Water Street) in Kelowna consists of two residential towers. The East Tower was completed in September 2021 and the West Tower was completed in September 2022. One Water Street was developed by Kerkhoff Construction and North American Development Group (collectively, the Developer).¹ The residents of One Water Street are represented by the Strata Council of EPS 7397 (the Strata).²

Kelowna OWS Utility Inc. (Kelowna OWS) provides thermal energy services, including space heating, cooling and domestic hot water, to the Strata. On July 28, 2021, by Order G-146-21A, Kelowna OWS was registered as a Stream A Thermal Energy System (TES).³ In accordance with the British Columbia Utilities Commission's (BCUC or Commission) TES Guidelines, Kelowna OWS is exempt from sections 44.1, 45, and 59-61 of the *Utilities Commission Act* (UCA).

Kelowna OWS relies on a variable refrigerant flow (VRF) air-source heat pump system to provide space heating and cooling, and relies on natural gas boilers to provide domestic hot water. The space heating system consists of a series of Daikin-brand variable flow air-source heat pumps.⁴

1.2 Complaint

On December 28, 2022, the Strata filed a complaint with the BCUC, which alleged that the thermal energy services provided by Kelowna OWS were unreliable and unsafe, in part due to the repeated failure of the heat pump components of Kelowna OWS' thermal energy system specifically the compressors within the heat pumps (Complaint).⁵ The Strata alleged that beginning in December 2021, multiple heat pumps began to fail, resulting in the interruption of space heating service to multiple One Water Street residents for extended periods of time.⁶

In addition to concerns with the space heating system, the Complaint also alleged that One Water Street residents were not receiving sufficient domestic hot water. Kelowna OWS acknowledged that it has received complaints from One Water Street residents regarding the supply of domestic hot water.⁷ Kelowna OWS stated that it had replaced components of the domestic hot water system in an attempt to address the issue.⁸ Following the filing of the Complaint, the Strata noted that some of its concerns with the domestic hot water supply were resolved, though some problems still persisted.⁹ In its September 24, 2023 submission, the Strata stated that its "greatest concern is with the space heating system."¹⁰

The Strata stated that the heat pumps provided adequate cooling services throughout the summer of 2022.¹¹

¹ Exhibit A2-1, pdf page 2.

² Ibid.

³ The BCUC issued revised TES Guidelines on February 26, 2025, and new exemption orders that apply to existing Stream A TES. Further information is provided in Section 1.3 of this decision.

⁴ Exhibit A2-1, pdf pages 2 & 4.

⁵ Ibid.

⁶ Ibid.

⁷ Exhibit B-1, BCUC IR 6.2.

⁸ Exhibit B-2, BCUC IR 14.1 & 14.2.

⁹ Exhibit C1-3, BCUC IR 5.2 & 5.2.1.

¹⁰ Exhibit C1-4, p. 3.

¹¹ Exhibit A2-1, pdf page 4.

1.3 Complaint Process for a Fixed-Scale TES (formerly known as Stream A TES)

On February 26, 2025, the BCUC issued revised TES Guidelines and new class exemption orders for public utilities that provide thermal energy services in British Columbia. The class exemption order establishing the Stream A TES class of TES¹² was rescinded and replaced by the class exemption order establishing the Fixed-Scale TES exemption class¹³. However, the individual exemption order granted to Kelowna OWS¹⁴ remains in place and is unaffected by the rescission of the Stream A TES class exemption. For clarity, Kelowna OWS remains exempt from sections 44.1, 45, and 59-61 of the UCA following the issuance of the revised TES Guidelines.

The previous version of the TES Guidelines, which were in effect at the time that the Strata filed its Complaint, states the following with respect to the BCUC receiving complaints regarding service:¹⁵

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.

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.

Additionally, section 83 of the UCA set out below, confers broad discretion on the BCUC in respect of review of complaints:

If a complaint is made to the commission, the commission has powers to determine whether a hearing or inquiry is to be held, and generally whether any action on its part is or is not to be taken.

¹² BCUC Order G-121-14.

¹³ BCUC Order G-47-25.

¹⁴ BCUC Order G-146-21A.

¹⁵ BCUC Order G-27-15, Appendix A, Part 2.3.3; The process that the BCUC undertakes when it receives a complaint about a TES is currently described in Part 3 of the TES Guidelines – see BCUC Order G-48-25, Appendix C, p. 7.

2.0 BCUC Review of the Complaint

2.1 Initial Response to the Complaint

On December 29, 2022, BCUC Staff initiated its complaint process to review the Complaint, which included issuing a request that Kelowna OWS respond to the Complaint, as well as to BCUC Staff questions regarding the Complaint.¹⁶

On January 10, 2023, Kelowna OWS filed a letter with the BCUC responding to the Strata's Complaint. In its response, Kelowna OWS acknowledged that certain suites in the One Water Street towers have experienced heating issues, with some units reporting insufficient space heating. However, Kelowna OWS states that any suite owner who expressed concern regarding the internal temperature of their suite was provided with supplementary heating units.¹⁷ Kelowna OWS did not maintain any information regarding the internal temperature of individual suites, nor did it monitor the heat settings of any individual suites.

Further, Kelowna OWS stated it had been working with the Developer to pursue warranty claims with Daikin, the manufacturer of the heat pumps. Kelowna OWS also noted that the engineer of record (Integral Group) and the heat pump sales representative (Olympic) had been analyzing the system and supporting potential solutions. Kelowna OWS estimated that as of January 1, 2023, a total of 65 suites were not receiving space heating and that each of these suites was supplied with supplementary heating.¹⁸ Despite working with the Developer, Olympic, Daikin, and Integral Group to ensure that the space heating system was fully restored, Kelowna OWS stated that the root cause of the equipment failure had yet to be determined.¹⁹

Kelowna OWS noted that, as of January 2023, it had ordered replacement components for the affected heat pumps. It anticipated installing these replacement components as they arrived.²⁰

Kelowna OWS stated that Daikin provided another report regarding the failed heat pumps based on its technical review of the site in Q1 2023 (February 2023 Daikin Report).²¹ Kelowna OWS stated that it is "actively implementing corrective actions noted in the [February 2023 Daikin Report]".²²

2.2 Panel appointed to review the Complaint

On May 5, 2023, a Panel was appointed to conduct the BCUC's review of the Complaint.²³ Prior to establishing a regulatory timetable for the review of the Complaint, the BCUC requested that Kelowna OWS file a copy of the February 2023 Daikin Report.²⁴ The BCUC received a copy of the February 2023 Daikin Report as part of the evidentiary record in this Complaint on July 7, 2023.²⁵

The BCUC established regulatory timetables for the review of the Complaint, which included two rounds of BCUC Information Requests (IRs).²⁶ Information gathered from the Strata and Kelowna OWS in responses to IRs indicated that some corrective actions were being implemented; however, the root cause(s) of the equipment

¹⁶ Exhibit A2-2.

¹⁷ Exhibit A2-1, pdf page 31.

¹⁸ Ibid., pdf page 32.

¹⁹ Ibid.

²⁰ Ibid.

²¹ Exhibit A2-2, BCUC IR 3.3.

²² Ibid.

²³ Exhibit A-1.

²⁴ Exhibit A-2.

²⁵ Exhibit A2-3.

²⁶ Orders G-176-23 and G-222-23.

failures was not yet determined.²⁷ Kelowna OWS explained that the equipment is complicated and proprietary, and therefore identification of the root cause(s) could only be completed by Daikin.²⁸

2.3 BCUC Orders Independent Investigation

Following its review of the submissions filed in the proceeding, the BCUC found that the current state of Kelowna OWS' thermal energy system, and Kelowna OWS' ability to provide space heating service to the Strata, to be unreliable and inadequate.²⁹ In its decision, the BCUC noted that despite the nearly two years that had passed since the Strata initially raised its concerns with respect to the thermal energy services it was receiving, Kelowna OWS had not been able to correct the heating issue or identify the root cause(s) of the TES equipment failure - either through its own efforts, or through the efforts of the other parties involved, such as Daikin. The BCUC considered that the progress towards remedying the unreliable and inadequate provision of space heating to be unacceptable, and therefore determined that there was a need for an independent engineering investigation of Kelowna OWS' space heating system.

Accordingly, the BCUC directed Kelowna OWS to submit to the BCUC for its prior review and approval the identity and qualifications of the third-party engineering consultant Kelowna OWS planned to retain. Further, the BCUC indicated that the purpose of the independent engineering investigation was to identify the root cause(s) of the Kelowna OWS equipment failures. The BCUC also outlined Areas of Focus of the Third-Party Engineer Report, including an assessment of the criticality and priority of the corrective actions, as well as the development of a schedule and budgetary costs to implement critical corrective actions.

3.0 Results of Third-Party Engineer Investigation

In response to BCUC Order G-302-23, Kelowna OWS proposed to retain Falcon Engineering Ltd. (Falcon Engineering) as the independent third-party engineering consultant.³⁰ By letter dated December 8, 2023, Kelowna OWS filed the form of contract for the Third-Party Engineer Retainer Agreement and the qualifications of Falcon Engineering. The Third-Party Engineer Retainer Agreement established the four Focus Areas as the scope of work to be completed by Falcon Engineering. Focus Areas 1 to 4 were described as follows:³¹

- Focus Area 1: Confirmation that the design capacity of the Kelowna OWS TES is sufficient to serve the peak demand of One Water Street.
- Focus Area 2: Evaluation of the current state of the Kelowna OWS TES and identification of the root cause(s) of equipment failures.
- Focus Area 3: Review current corrective actions and make new recommendations.
- Focus Area 4: Development of a schedule and budgetary costs to implement the critical corrective action(s) identified in the report for Focus Area 3. Third-Party Engineer would be required to provide oversight to ensure that corrective actions are undertaken (by Others) in accordance with their recommendations, so the Engineer's time should be included in the Budgetary costs.

By letter dated December 12, 2023, the BCUC approved Falcon Engineering as the third-party engineering consultant on the condition that there is no conflict of interest with Kelowna OWS.³²

²⁷ Exhibit B-1, BCUC IR 3.2.

²⁸ Exhibit B-2, BCUC IR 13.3.

²⁹ Order G-302-23.

³⁰ Exhibit B-4.

³¹ Ibid., pdf pages 52-54.

³² Exhibit A-11.

3.1 Focus Area 1 Engineering Report (March 12, 2024)

In the Focus Area 1 Engineering Report, Falcon Engineering explained that it completed a calculation of the peak heating requirements of the One Water Street buildings using industry standard methods.³³ Falcon Engineering then compared the peak load requirements of the One Water Street buildings to the installed capacity of the VRF heat pump system equipment. Falcon Engineering obtained the capacity of the VRF heat pump system equipment from the relevant engineering drawings.³⁴

Falcon Engineering determined that the installed heating capacity of some of the VRF heat pump units serving each floor within the One Water Street buildings was below the assessed peak load, while others were above the heating load calculated. In summary, Falcon Engineering states the following:³⁵

The heating capacity of the VRF condenser floor units do not appear to be grossly under sized; however, over half of the VRF condenser units were either lower than the block load value or were just near to the block load value. Based on the block load calculation results, the VRF condenser sizes may not fully explain the extent of the heating system issues reported at One Water Street. However, the VRF condenser sizing does not appear to be fully adequate and would be contributing to the issue.

Falcon Engineering further noted that actual performance of the VRF heat pump system equipment was expected to be somewhat worse than its design capacity during defrost operation.³⁶ In addition, the block load calculation to determine peak load requirements of the One Water Street buildings was completed assuming an outdoor temperature of -20 °C, which does not account for periods of extreme cold below this temperature that may be experienced in Kelowna.³⁷

3.2 Focus Area 2 Engineering Report (April 29, 2024)

In the Focus Area 2 Engineering Report, Falcon Engineering stated that of the 144 heat pumps Kelowna OWS operates as part of its TES serving One Water Street residents, compressor failures have occurred within 54 heat pumps since the system was commissioned.³⁸ Falcon Engineering stated that the main cause of the VRF system compressor failures was due to a lack of oil (lubricant for the compressor) returning from the refrigerant piping systems to the compressor.³⁹ Falcon Engineering further noted that most of the compressor failures occurred during particularly cold weather and then for a period following the cold weather.⁴⁰

Several other observed conditions of the VRF systems were noted by Falcon Engineering; however, Falcon Engineering clarified that “it is not that any one of the observed conditions will lead to the failure of the compressors, but a combination of the weaknesses in the system.”⁴¹ For example, Falcon Engineering identified issues with the installation of the oil piping, the sizing of the oil piping, the insulation of the refrigerant piping on the rooftop and system start-up practices.⁴² In addition, Falcon Engineering noted that the roof top heat pump equipment is surrounded by a wall which appears to be short circuiting the cold air expelled by the heat pumps.

³³ Exhibit B-5, pdf page 1.

³⁴ Ibid., pdf page 2.

³⁵ Ibid., pdf page 3.

³⁶ Ibid., pdf page 3. Falcon Engineering describes defrost in the following manner: “Defrost occurs when the heating system reverses in order to melt accumulated ice on the exterior evaporator coils. Defrost has not been accounted for in the VRF heating capacity as the derate is not available for these conditions.”

³⁷ Exhibit B-5, p. 4.

³⁸ Exhibit B-9, p. 2.

³⁹ Exhibit B-9, p. 2 & 9.

⁴⁰ Ibid.

⁴¹ Exhibit B-9, p. 9.

⁴² Ibid., pp. 4-8.

This short circuiting results in the heat pump seemingly operating in temperatures below actual ambient conditions, degrading the performance and reliability of the heat pumps.⁴³ Falcon Engineering provided its recommendations of how to address these noted issues with the VRF system.

3.3 Focus Area 3 Engineering Report (June 25, 2024)

In the Focus Area 3 Engineering Report, Falcon Engineering reaffirmed that the likely main cause of the heat pump failures was related to lack of oil lubricant for the system compressors. Further to the main cause of the VRF system compressor failures identified above and in the Focus Area 2 report, Falcon Engineering stated in the Focus Area 3 Engineering Report that the “most likely mode of compressor failure indicated by the manufacturer indicate that slugs of liquid refrigerant may be momentarily washing out the lubricant in the compressor, causing metal on metal wearing at the thrust surface. The fine metal shavings are then making their way to the line voltage terminal and causing a short there.”⁴⁴ Falcon Engineering stated that it looks to the manufacturer of the heat pumps for potential solutions regarding the unwanted displacement of lubricant “as it appears that most of the failures are occurring with one particular model of compressor.”⁴⁵

The Focus Area 3 Engineering Report provided further recommendations to address the identified factors leading to compressor failures. In addition, Falcon Engineering reported on the status of implementing each recommendation.⁴⁶ For example, at the time of filing the Focus Area 3 Engineering Report, proposals to mitigate short circuiting were being prepared and oil pipe sizing had been corrected.⁴⁷

3.4 Focus Area 4 Engineering Report (August 29, 2024)

In the Focus Area 4 Engineering Report, Falcon Engineering provided information about 12 identified issues related to the performance of the Kelowna OWS TES, such as status, anticipated completion and costs.⁴⁸ For example, Falcon Engineering stated that a test to determine if short circuiting remains an issue will be conducted in December 2024. Further, Falcon Engineering reported that wind screens have been installed to reduce excessive heat loss during defrost operation and branch controllers have been replaced to improve VRF system control.⁴⁹

Falcon Engineering also reported that some of the remedies to the identified issues were no longer outstanding. For example, Falcon Engineering reports that the recommended piping insulation had been installed on the relevant rooftop piping.⁵⁰

4.0 Performance of Kelowna OWS TES during 2023-24 Heating Season

By letter dated April 18, 2024, the BCUC requested the Strata to provide information regarding the performance of Kelowna OWS’ TES during the winter period of 2023-2024.⁵¹ The Strata provided this information by letter dated May 4, 2024. The Strata listed 15 instances of compressor failure occurring in the East and West Towers between October 31, 2023 and March 3, 2024. The duration of the outage of heating supply in these instances ranged between one and ten days.⁵²

⁴³ Exhibit B-9, p. 2.

⁴⁴ Exhibit B-12, pp. 2 & 10.

⁴⁵ Ibid., p. 10.

⁴⁶ Ibid., pp. 3-9.

⁴⁷ Ibid., pp. 3.

⁴⁸ Exhibit B-14, p. 2.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ Exhibit A-15.

⁵² Exhibit C1-5, p. 1.

During these outages, the Strata stated that the response time for the repair of the failed compressors had improved due to improved availability of spare compressors and parts, however repair times could still extend to over a week. As well, the Strata noted that portable heating units were provided to residents that experienced heating outages, although “these are still insufficient in extremely cold temperatures, such as those experienced during mid-January of 2024.”⁵³

The Strata further noted that Kelowna OWS had hired a new emergency response service contractor for the One Water Street buildings, and that since this hiring the “emergency response has greatly improved.”⁵⁴

5.0 Updates to Focus Area 4 Engineering Report

5.1 Update 1

On December 12, 2024, Falcon Engineering provided an update regarding the identified issues related to the performance of the Kelowna OWS TES.⁵⁵ Falcon Engineering noted that it is aware of four system failures that have occurred since September 2024 and that the cause of these failures had not yet been provided.

Falcon Engineering reported that work to remedy undersized oil piping and to address issues with piping installation continues. Further, new branch controllers were installed, and programming of the new controllers had been completed.⁵⁶

5.2 Update 2

By Order G-38-25, dated February 21, 2025, the BCUC directed Kelowna OWS to provide a further update to the Focus Area 4 Engineering Report. On March 13, 2025, Falcon Engineering provided a second update regarding the identified issues related to the performance of the Kelowna OWS TES. Falcon Engineering reported that a total of nine system failures had occurred since September 2024 and that there appeared to be little evidence to support one failure mode over another.⁵⁷ For example, a system failed three times despite upgrades having been made to its oil pipe sizing.⁵⁸

Falcon Engineering concluded with the following:⁵⁹

The rate of compressor failures appears to be dropping. That is a good sign. But this could be more attributed to a mild winter as much as the new branch controllers. The present failures could be attributed to excessive wear and tear prior to upgrades to the branch selectors.

The regulatory timetable established by Order G-38-25 included a deadline of March 27, 2025 for further written submissions from the Strata, as well as a deadline of April 3, 2025 for a written reply from Kelowna OWS. No submissions were filed by the Strata.

⁵³ Exhibit C1-5, p. 2.

⁵⁴ Ibid.

⁵⁵ Exhibit B-15, p. 2. Focus Area 4 Update 1 reports on 14 identified issues, whereas Focus Area 4 Engineering Report listed only 12 identified issues. Two issues were added; Falcon Engineering reported on an additional “Recent Failures” issue and added a “Manifold pipe sizing” sub-issue to the previous “Pipe Sizing” issue.

⁵⁶ Exhibit B-15, p. 2.

⁵⁷ Exhibit B-16, p. 1.

⁵⁸ Ibid.

⁵⁹ Ibid.

6.0 Panel Determination

The Panel is satisfied with the progress Kelowna OWS has made towards remedying its unreliable and inadequate provision of space heating to the residents of One Water Street. The investigations completed by Falcon Engineering since December 2023 have led to the identification of the likely main cause of VRF system compressor failures as relating to the lack of oil lubricant under certain operating circumstances. The Panel acknowledges Falcon Engineering's assessment that the VRF system compressor failures have likely occurred due to a combination of issues.

Submissions made during the review of the Complaint indicate that the rate of VRF system compressor failures has decreased during the most recent 2024-2025 heating season as compared to previous heating seasons. However, as the VRF system compressor failures have continued to occur, albeit at a decreased rate as compared to previous heating seasons, it does not appear that Kelowna OWS nor Daikin have fully addressed the root causes of the failures. The Panel notes that when failures have occurred, Kelowna OWS' emergency response has improved. Following Kelowna OWS' further update to the Focus Area 4 Engineering Report, the Panel provided an opportunity for the Strata to make any final submissions by March 27, 2025. As the Strata has not made any further complaint or submissions since May 2024, the Panel infers that the Strata is satisfied with the remedies made to date. **Accordingly, the Panel determines that it is appropriate to conclude its review and close the Complaint at this time.**

The Panel notes that despite the current closure of the Complaint, the BCUC will continue its general oversight of Kelowna OWS and its operations regarding safe and reliable service. This includes through the annual reporting required by Kelowna OWS pursuant to BCUC Order G-146-21A. Further, the TES Guidelines require that Fixed-Scale TES Providers, such as Kelowna OWS, notify the BCUC as soon as practicable following a critical safety incident arising from its service, or an incident where the Fixed-Scale TES' service caused significant damage to public or private property and/or posed a significant risk to public safety.⁶⁰

The Panel considers the involvement of the independent, third-party engineering consultant Falcon Engineering to have significantly contributed to Kelowna OWS' progress towards providing safer and more reliable service to its customers. In particular, the Panel considers the summary of issues discovered during the course of Falcon Engineering's investigation, as provided in the Focus Area 4 Engineering Report, has served to focus the efforts of all involved to lower the frequency and duration of Kelowna OWS heating supply outages. The Panel expects Kelowna OWS to continue to prudently resolve outstanding issues identified in the second update to the Focus Area 4 Engineering Report, as well as any future issues that may be identified as contributing to any future unplanned interruptions to thermal energy services.

DATED at the City of Vancouver, in the Province of British Columbia, this 18th day of June 2025.

Electronically signed by Bernard Magnan

B. A. Magnan
Panel Chair

Electronically signed by William Everett

W. M. Everett, KC
Commissioner

⁶⁰ BCUC TES Guidelines, Appendix C, p. 6.