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#### ORDER NUMBER G-207-24

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

and

Kyuquot Power Limited Resource Assessment Report

#### **BEFORE:**

M. Jaccard, Panel Chair C. M. Brewer, Commissioner E. A. Brown, Commissioner

on August 2, 2024

#### ORDER

#### WHEREAS:

- A. On October 26, 2023, Kyuquot Power Limited (KPL) filed with the British Columbia Utilities Commission (BCUC) a Resource Assessment Report (Application) to comply with Directive 7 of Order G-302-22 and pursuant to section 44.1 of the *Utilities Commission Act* (UCA);
- B. On January 17, 2024, KPL submitted an evidentiary update regarding a potential capacity upgrade at the British Columbia Hydro and Power Authority Point of Interconnection;
- C. By Order G-333-23, G-7-24, G-6-24, and G-115-24, the BCUC established and amended regulatory timetables for the review of the Application. The regulatory process included: one round of information requests (IRs); filing of intervener evidence, and IRs on same; and written final argument from KPL and Ka:'yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN), and reply argument from KPL;
- D. KPL asks the BCUC to accept:
  - 1. The Resource Assessment Report as adjusted to include the Chamiss Bay camp; and
  - 2. KPL's proposal to file long-term resource plans as required.
- E. The BCUC has reviewed the evidence and arguments filed in this proceeding and makes the following determination.

**NOW THEREFORE** for the reasons outlined in the decision accompanying this order, the BCUC orders pursuant to section 44.1(6) of the UCA, KPL's Resource Assessment Report as adjusted to include load from the Chamiss Bay camp is accepted.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 2<sup>nd</sup> day of August 2024.

BY ORDER

Original signed by:

M. Jaccard Commissioner

# Kyuquot Power Limited Resource Assessment Report

## DECISION

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#### **Executive Summary**

On October 26, 2023, Kyuquot Power Limited (KPL) filed its Resource Assessment Report (Application) in compliance with Directive 7 of Order G-302-22 regarding the Investigation into the Safety and Reliability of the KPL System. The directive requires KPL to file with the British Columbia Utilities Commission (BCUC) a long-term resource plan with a 10-year forecast and plan setting out how it will meet the forecast load that supports the Ka:'yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN)'s community aspirations, within one year of that order. Accordingly, this Application was reviewed pursuant to section 44.1 of the *Utilities Commission Act* (UCA), for acceptance by the BCUC.

KPL operates an electrical distribution system in the Kyuquot area on Vancouver Island, interconnected to the BC Hydro overhead distribution system. Over the past decade, KPL has experienced load growth, and forecasts further increases in electricity consumption and peak demand over the next ten years. To meet this demand, KPL has proposed upgrading its system capacity at the British Columbia Hydro and Power Authority (BC Hydro) Point of Interconnection (POI) and managing peak demand through customer demand reduction or partial self-generation during peak periods.

Pursuant to section 44.1(6), the Panel finds KPL's Resource Assessment Report to be in the public interest and accordingly accepts this report. In making this determination, the Panel concludes that KPL's use of historical data for forecasting future demand is appropriate for KPL, a small utility, given the information available to KPL at the time of the Application.

The Panel acknowledges KCFN's community aspirations and recognizes the potential load associated with these aspirations. However, it notes KPL's concerns about the uncertainty of the projected load materializing due to various economic and logistical factors. Despite these concerns, the Panel observes that if KCFN's aspirations are realized, the resulting load would likely fall within the range of KPL's proposed capacity upgrade. The Panel supports a flexible approach to forecasting and utility planning, allowing adjustments based on trends and significant changes.

The Panel notes that the evidence from both KPL and KCFN indicates that peak demand is likely to rise beyond KPL's existing capacity, necessitating further action to ensure reliable service. Therefore, the Panel supports KPL's proposed capacity upgrade as the preferred approach to meet future demand and address the capacity limit at the BC Hydro POI. The timing of the upgrade will depend on the utility's judgment based on available facts.

Contrary to a request by KCFN, the Panel determines that KPL is not required to file another resource assessment report in the near future. Considering the negligible benefit of such an update, and the associated costs, including the potential for rate impact associated with regulatory filings, the Panel concludes that neither party would benefit from the filing of another resource assessment report at this time. The Panel suggests that KPL should retain the flexibility to manage its operations strategically. The Panel finds it appropriate for KPL to file a Certificate of Public Convenience and Necessity for the capacity upgrade as the next regulatory step.

## 1.0 Introduction

On October 26, 2023, Kyuquot Power Limited (KPL) filed with the British Columbia Utilities Commission (BCUC) a Resource Assessment Report (Application) in compliance with Directive 7 of Order G-302-22 regarding the Investigation into the Safety and Reliability of the KPL system, which states:

Within one year of this Order, KPL is directed to file a long-term resource plan with a 10-year forecast and plan setting out how it will meet the forecasted load that supports the Ka:'yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN)'s community aspirations.<sup>1</sup>

This Application was filed to comply with Directive 7 of that order and was reviewed pursuant to section 44.1 of the *Utilities Commission Act* (UCA). KPL requests that the BCUC accept the Resource Assessment Report as being in the public interest.

## 1.1 Background

KPL owns and operates an electrical distribution system located in the Kyuquot area on Vancouver Island. It provides electricity to 42 residential and commercial accounts and one account of the KCFN. KPL's system includes 44 kilometres (km) of overhead 14.4 kilovolt (kV) single-phase distribution line and 8 km of single-phase submarine cable. The system is interconnected to the BC Hydro overhead distribution system at Oclucje and extends to Kyuquot.<sup>2</sup>

Over the past decade, KPL has experienced load growth within its system and based on the 11-year historical data from July 1, 2012, to June 30, 2023, KPL forecasts a further increase in electricity consumption<sup>3</sup> and peak demand for the next ten years.<sup>4</sup> KPL's system currently faces a limitation tied to the maximum allowable peak demand at the British Columbia Hydro and Power Authority (BC Hydro) Point of Interconnection (POI).<sup>5</sup> KPL's recent peak demand is already approaching the current maximum allowable peak demand of 500 kilowatts (kW),<sup>6</sup> standing at 423 kW as of February 2024.<sup>7</sup> According to its forecast, KPL expects that the peak demand will grow and exceed the 500 kW-limit in winter 2026/2027, and based on the upper confidence bound, this could occur as early as winter 2024/2025.<sup>8</sup>

## 1.2 Approvals Sought

KPL asks that the BCUC accept the Resource Assessment Report as adjusted to include Chamiss Bay camp along with KPL's proposal to file long-term resource plans as required.<sup>9</sup>

# 1.3 Legislative Framework

Section 44.1 of the UCA establishes the BCUC's framework for reviewing KPL's Resource Assessment Report. While section 44.1(2) provides that a public utility must file a long-term resource plan that includes several

<sup>&</sup>lt;sup>1</sup> <u>Order G-302-22</u>, p. 3.

<sup>&</sup>lt;sup>2</sup> Exhibit B-1, p. 2.

<sup>&</sup>lt;sup>3</sup> Ibid., pp. 3-5.

<sup>&</sup>lt;sup>4</sup> Ibid., pp. 7-8.

<sup>&</sup>lt;sup>5</sup> Ibid., p. 3.

<sup>&</sup>lt;sup>6</sup> Ibid., p. 3 and p. 7.

<sup>&</sup>lt;sup>7</sup> Exhibit B-3, KPL's response to BCUC IR 5.4.

<sup>&</sup>lt;sup>8</sup> Exhibit B-1, p. 8.

<sup>&</sup>lt;sup>9</sup> KPL Final Argument, p. 3.

components,<sup>10</sup> Sections 44.1(6) and (7) of the UCA require the BCUC to accept the plan if it determines that implementing the plan is in the public interest, or reject the plan in whole or in part. In determining whether the Resource Assessment Report is in the public interest, section 44.1(8) of the UCA specifies several criteria the BCUC must consider.<sup>11</sup> The Panel has considered all of the criteria outlined in section 44.1, but in this decision the Panel focuses on the most significant matters given KPL's small size and unique circumstances, such as load forecast and KPL's ability to meet the forecast load on an on-going basis.

# 1.4 Regulatory Process

The BCUC established regulatory timetables for the review of KPL's Resource Assessment Report, which included the following regulatory process:

- One round of information requests (IRs);
- Filing of intervener evidence by KCFN, and IRs on same;
- Written final argument from KPL, KCFN, and reply argument from KPL.

The following parties registered as interveners in the proceeding:

- Ka:'yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN).
- School District 84 (SD 84).

## **1.5** Decision Outline

The remainder of the Decision is structured as follows:

- Section 2 determines whether KPL's demand forecast is reasonable;
- Section 3 evaluates whether a proposed capacity upgrade is the preferred option to meet increases in peak demand on KPL's system and if there are viable alternatives to the capacity upgrade;
- Section 4 addresses the issue of whether KPL should file another resource assessment report; and
- In Section 5, the Panel provides its overall determination on whether accepting the Resource Assessment Report is in the public interest.

# 2.0 Is KPL's Demand Forecast Reasonable?

KPL reports that its system has shown a consistent pattern of growth in both annual electricity consumption (MWh) and peak demand (kW). From 2012 to 2023, electricity consumption has grown annually by 2.64 percent<sup>12</sup> and peak demand by 2.16 percent.<sup>13</sup> To forecast its future demand over the next ten years, KPL uses a

<sup>12</sup> Exhibit B-1, pp. 4-5.

<sup>13</sup> Ibid., pp. 7-8.

<sup>&</sup>lt;sup>10</sup> Section 44.1(2) requires that a public utility must file with the commission a long-term resource plan that includes all of the following: an estimate of demand, a plan to reduce the estimated demand, the estimated demand after taking costeffective demand-side measures, a description of the facilities needed to serve the estimated demand, information regarding the energy purchases, an explanation of why the estimated demand is not planned to be replaced by demand-side measures, and any other information required by the commission.

<sup>&</sup>lt;sup>11</sup> Section 44.1(8) requires that in determining whether to accept a long-term resource plan, the commission must consider the applicable of British Columbia's energy objectives; the extent to which the plan is consistent with the applicable requirements under sections 6 and 19 of the Clean Energy Act; whether the plan shows that the public utility intends to pursue adequate, cost-effective demand-side measures; and the interests of persons in British Columbia who receive or may receive service from the public utility.

regression model in Excel,<sup>14</sup> estimating a 1.90 percent increase in annual electricity consumption<sup>15</sup> and a 3.77 percent increase in peak demand,<sup>16</sup> as shown in the reproduced figures below. The regression model generates three different bounds: the lower confidence, forecast, and upper confidence bound,<sup>17</sup> reflecting a range of possible outcomes.<sup>18</sup>



Figure 1: KPL's Historical and Forecast Annual Electricity Consumption<sup>19</sup>





- <sup>14</sup> Exhibit B-1, p. 4.
- <sup>15</sup> Ibid., p. 5.
- <sup>16</sup> Ibid., p. 8.
- <sup>17</sup> Ibid., pp. 4-7.
- <sup>18</sup> Ibid., p. 22.
- <sup>19</sup> Ibid., p. 5.
- <sup>20</sup> Ibid., p. 9.

KPL's electricity consumption increased from 1,501 megawatt hours (MWh) in 2012 to 1,705 MWh in 2023. The forecast predicts growth to 2,181 MWh by 2034.<sup>21</sup> Similarly, peak demand grew from 314 kW in 2012 to 397 kW in 2023,<sup>22</sup> with year-to-year variations due to several factors.<sup>23</sup> Notably, the peak demand recorded during the winter of 2019/2020 was 489 kW.<sup>24</sup> The forecast indicates that peak demand will reach 596 kW by the end of the planning horizon, with the lower and upper confidence bounds at 508 kW and 684 kW, respectively.<sup>25</sup>

Despite the anticipated increase in annual electricity consumption over the next ten years, KPL states that this will not impact its system design. The limitation to KPL's system lies in the maximum peak demand allowed by BC Hydro's system. Consequently, KPL emphasizes that the peak demand, rather than annual electricity consumption, needs to be addressed.<sup>26</sup>

In addition to forecasting annual electricity consumption and peak demand, KPL assessed changes in community infrastructure that might affect its system. This includes KCFN's infrastructure in Houpsitas, SD 84, residential and commercial accounts on Walters Island and surrounding islands, and Chamiss Bay. However, KPL encountered challenges in obtaining long-term plans from these customers. Despite contacting KCFN multiple times, KPL stated KCFN did not provide any information to KPL. SD 84 mentioned stable infrastructure but did not provide detailed long-term plans. KPL states it is not aware of any residential development plans for Walters Island, although it has not canvassed the local community. Further, KPL submits that the demand from Chamiss Bay, led by KCFN and Tiicma Enterprise, remains unclear.<sup>27</sup> KPL submits it intends to coordinate with Tiicma on ownership changes at the Chamiss Bay camp and assess winter peak demand upon receiving service applications.<sup>28</sup>

Another factor KPL assessed was the impact of the provincial electrification program in British Columbia (BC). KPL notes that water transportation is predominant in Kyuquot, and much of the heating load (including hot water) within Houpsitas, its largest customer account, is already electrified. Therefore, the provincial electrification program is not expected to cause a significant increase in electricity demand in Kyuquot over the next ten years.<sup>29</sup>

KPL states it is aware of a government plan to promote electric cars, but it says Kyuquot should be relatively unaffected by electric vehicle (EV) support programs. KPL further explains that since wood and propane are the main alternatives for heating in Kyuquot, heat pump subsidies will not have a substantial impact.<sup>30</sup> In contrast, KCFN argues that as heat pumps become more common, the use of wood burning is expected to decrease, leading to higher electricity demand.<sup>31</sup>

As KPL's Resource Assessment Report pertains to KCFN's community aspirations and KPL's ability to meet KCFN's load growth, the BCUC invited KCFN to participate and submit evidence in the proceeding. This invitation sought to allow KCFN to present its community aspirations that might influence KPL's future peak demand. KCFN

<sup>&</sup>lt;sup>21</sup> Ibid., pp. 4-5.

<sup>&</sup>lt;sup>22</sup> Exhibit B-1, pp. 7-8.

<sup>&</sup>lt;sup>23</sup> Exhibit B-3, KPL's response to BCUC IR 4.2. While KPL is unaware of the specific factors that influence its yearly variations of peak demand, KPL states that general factors may include seasonal and weather variations, conditions for seasonal or long-term customers/businesses such as fishing closures, COVID/health requirements, the use of auxiliary generators during outages, electrical heating/cooling loads, etc.

<sup>&</sup>lt;sup>24</sup> Exhibit B-1, p. 7.

<sup>&</sup>lt;sup>25</sup> Ibid., p. 8.

<sup>&</sup>lt;sup>26</sup> Ibid., p. 14.

<sup>&</sup>lt;sup>27</sup> Ibid., pp. 10-11.

<sup>&</sup>lt;sup>28</sup> Exhibit B-3, KPL's response to BCUC IR 7.6.

<sup>&</sup>lt;sup>29</sup> Exhibit B-1, pp. 11-12.

<sup>&</sup>lt;sup>30</sup> Exhibit B-4, KPL's response to KCFN IR 2.1

<sup>&</sup>lt;sup>31</sup> Exhibit C2-7, KCFN's response to KPL IR 2.1.

subsequently submitted a load forecast study conducted by Site Power Engineering Consultants (SPEC), detailed below.

# 2.1 KCFN Load Forecast Study

KCFN's load forecast study, conducted by SPEC, outlines a 10-year peak demand forecast based on various KCFN community aspirations. These include upgrades to existing facilities in Houpsitas such as electric heating and EV charging, expansions within Houpsitas, and development plans in other areas of interest for KCFN, such as Fair Harbour, Chamiss Bay, Cougar Lodge, and Amos Island.<sup>32</sup>

SPEC calculated KCFN's expected load at BC Hydro's POI by assessing the current and future peak load at both the transformer and feeder levels, adjusting for a diversity factor.<sup>33</sup> SPEC explains that these methodologies were applied to the existing KCFN facilities and evaluated against the community's aspirations over the next decade.<sup>34</sup>

Based on the proposed upgrades and additional loads, SPEC anticipates that KCFN's peak demand over the next ten years will be as follows: For the existing upgrades in Houpsitas, SPEC expects the total peak demand to be between 325 and 355 kW. For additional loads in Houpsitas, an anticipated peak demand of 145 kW is projected. For other KCFN interests spread across several areas in Kyuquot, an anticipated additional peak demand of 330 kW is forecasted.<sup>35</sup>

In total, SPEC expects KCFN's peak demand in ten years to be between 805 and 830 kW.<sup>36</sup> SPEC notes that this load forecast study does not evaluate the feasibility of these aspirations but rather examines the potential power demand they would generate if realized.<sup>37</sup>

KCFN states that it is concerned about KPL adding loads outside Houpsitas, which could jeopardize plans within Houpsitas.<sup>38</sup> KCFN has explored distributed energy generation options without success, and the lack of net metering on the KPL system has been a challenge to implementing a distribution energy strategy. KCFN notes that even with alternative energy sources, a meaningful impact on peak loading would require large-scale local energy storage capabilities.<sup>39</sup>

Regarding a high-level assessment of the risks and uncertainties around KCFN's aspirations, KCFN states that it prioritizes adding new single-family homes within ten years, but expansion depends on confirming power availability from KPL. KCFN further explains that comprehensive engineering is needed for long-term loads, while mid-term loads would be completed within five years of power confirmation and near-term loads within two years.<sup>40</sup> KCFN states it would be speculative to opine on the likelihood that these aspirations would materialize until power availability is confirmed by KPL.<sup>41</sup>

KCFN asked KPL whether it intends to retain a qualified professional engineer to engage directly with a qualified professional engineer representing KCFN.<sup>42</sup> KPL responded that its existing management, staff, and consultants

<sup>36</sup> Ibid., pdf pp. 17.

<sup>&</sup>lt;sup>32</sup> Exhibit C2-5, pdf p. 5.

<sup>&</sup>lt;sup>33</sup> Ibid., pdf p. 10.

<sup>&</sup>lt;sup>34</sup> Ibid., pdf p. 15.

<sup>&</sup>lt;sup>35</sup> Ibid., pdf pp. 15-17.

<sup>&</sup>lt;sup>37</sup> Ibid., pdf p. 6.

<sup>&</sup>lt;sup>38</sup> Exhibit C2-7, KCFN's response to BCUC IR 2.1.

<sup>&</sup>lt;sup>39</sup> Ibid., KCFN's response to BCUC IR 2.2.

<sup>&</sup>lt;sup>40</sup> Ibid., KCFN's response to BCUC IR 4.1.

<sup>&</sup>lt;sup>41</sup> Ibid., KCFN's response to BCUC IR 4.2.

<sup>&</sup>lt;sup>42</sup> Exhibit C2-3, KCFN IR 9.1.

handle consultations with KCFN and would involve engineering consultants if needed, preferring a single KPL contact for consistency.<sup>43</sup> KCFN emphasized that it requests KPL appoint a professional engineer as their primary contact for discussions about electricity supply and load forecasting. KCFN believes that having a professional engineer integrated into KPL's management would ensure clearer communication, fair treatment, and better record-keeping, given the complex legal and technical issues involved.<sup>44</sup>

# Positions of the Parties

KPL states that its Resource Assessment Report provides a reasonable estimate for its 10-year peak demand forecast, given the information available to KPL.<sup>45</sup> Further, KPL explains that relying on forecasts using regression modeling with a standard Excel forecasting function appears to be warranted and prudent.<sup>46</sup> KPL seeks approval from the BCUC to accept the Resource Assessment Report as adjusted to include load from the Chamiss Bay camp<sup>47</sup> estimating at around 75 kW,<sup>48</sup> even though KFCN has yet to confirm electricity purchase of the camp and whether it will connect to KPL for its electricity needs.<sup>49</sup>

KPL states that before receiving KCFN's evidence, it lacked information on significant new developments for load forecasts.<sup>50</sup> Therefore, except for Chamiss Bay, no other large new facilities expected by 2034 were included by KPL.<sup>51</sup> KPL submits that KCFN's load study conducted by SPEC ignores the capacity upgrade and lacks clear timing for new projects, making their materialization within ten years uncertain.<sup>52</sup>

KPL submits that the partial completion of some facilities contemplated by KCFN may already be accounted for in KPL's forecasted range.<sup>53</sup> KPL claims that KCFN-related loads will not reach 805-830 kW as contemplated by SPEC for several reasons, including: <sup>54</sup>

- KCFN emphasizes that it is premature to make definitive forecasts until there is confirmation of adequate power availability by KPL. KPL notes that this uncertainty makes KCFN's forecast more speculative than probable;
- KCFN's load forecast conducted by SPEC does not include an analysis of economic viability, particularly for the additional loads. It fails to compare the costs of existing diesel generation with the proposed KPL electricity supply, missing a critical component of assessing the feasibility of the forecasted demand increase;
- SPEC bases its forecast on data from the Lower Mainland, which may not be applicable to Kyuquot. Kyuquot has unique characteristics, such as significant seasonal business activities and different patterns of EV and heat pump usage, which are not adequately considered in the study;
- SPEC uses a methodology that focuses on individual building panels and does not incorporate broader economic and sociological parameters. This approach can lead to oversizing and does not align with

- <sup>52</sup> Ibid., p. 6.
- <sup>53</sup> Ibid., p. 6.

<sup>&</sup>lt;sup>43</sup> Exhibit B-4, KPL's response to KCFN IR 9.1.

<sup>&</sup>lt;sup>44</sup> Exhibit C2-7, KCFN's response to BCUC IR 2.3, 2.4.

<sup>&</sup>lt;sup>45</sup> KPL Final Argument, p. 2.

<sup>&</sup>lt;sup>46</sup> Ibid., p. 5.

<sup>&</sup>lt;sup>47</sup> Ibid., p. 3, p. 16.

<sup>&</sup>lt;sup>48</sup> Ibid., p. 2, p. 6.

<sup>&</sup>lt;sup>49</sup> Exhibit C2-7, KCFN's response to BCUC IR 4.5.

<sup>&</sup>lt;sup>50</sup> KPL Final Argument, p. 4.

<sup>&</sup>lt;sup>51</sup> Ibid., p. 6.

<sup>&</sup>lt;sup>54</sup> Ibid., pp. 10-11.

common utility load forecasting practices, which typically consider population growth and average residential/commercial electricity use.

KCFN expresses concern that the Resource Assessment Report indicates KPL's proposed plan does not advance or support BC's energy objectives, fails to meet the needs of KPL's customers, and lacks a credible and up-todate assessment of the system's potential to meet future demand.<sup>55</sup> KCFN emphasizes that there is inadequate capacity of the KPL system to serve future load growth. Regarding Chamiss Bay camp, KCFN mentions that connecting the camp to the KPL system has long been contemplated.<sup>56</sup>

In terms of the impact of the provincial electrification plan, KPL states in reply to KCFN that due to Kyuquot's small size and isolation, new electrification initiatives in BC will likely have minimal impact on its electricity use. KPL explains that Houpsitas has few roads, and boating is the primary mode of transportation. The effect of new heat pump installations on electricity usage depends on whether they replace resistive electric heating or non-electric heating. Additionally, the high cost of electricity limits heating use in Kyuquot, excluding Houpsitas.<sup>57</sup>

KCFN states that the additional demand due to the provincial electrification plan should not be ignored.<sup>58</sup> In its reply, KPL explains that it has addressed the overall issues regarding the impact of the provincial electrification plan and reiterates that the impact would not be significant. KPL argues that it did not ignore or trivialize this issue.<sup>59</sup>

## Panel Determination

The Panel determines that KPL's demand forecast is reasonable and sufficient for the purpose of this Application. We find that a relatively simple method for forecasting future demand, such as KPL's use of historical data, is appropriate for a small utility such as KPL and is reflective of the information available to KPL at the time of preparing the Application.

The Panel notes that forecasts will always be subject to change and should focus primarily on identifying potential actions that may be required for the future provision of safe and reliable service. Forecasting for a small utility is inherently challenging. It is important to recognize that any large single development could significantly impact the forecast, and there is substantial uncertainty in forecasting.

The Panel recognizes KCFN's community aspirations and acknowledges that KCFN's evidence provides an indication of the potential load associated with these aspirations, which aligns with Directive 7 of Order G-302-22. However, the Panel also notes the concerns raised by KPL about the uncertainty of the projected load materializing over the planning horizon due to the high-level nature of the forecast. The Panel shares KPL's concerns that various economic and logistical factors are not fully considered in SPEC's forecast, including the economic viability of the upgrades, the applicability of data from other regions, and the methodologies used in the load forecast.

Despite these concerns, the Panel observes that if all of KCFN's community aspirations are realized, the resulting load may fall within the range of the capacity upgrade that KPL contemplates, as noted in the following section.

The Panel also recognizes that provincial electrification initiatives may have an impact on peak demand. However, this impact depends on the technology used (e.g. heat pumps, electric vehicles), the speed of the

<sup>&</sup>lt;sup>55</sup> KCFN Final Argument, para 10, p. 3.

<sup>&</sup>lt;sup>56</sup> KCFN Final Argument, para 12, p. 4.

<sup>&</sup>lt;sup>57</sup> KPL Final Argument, p. 4.

<sup>&</sup>lt;sup>58</sup> KCFN Final Argument, para 12, p. 4.

<sup>&</sup>lt;sup>59</sup> KPL Reply Argument, p. 5.

technology adoption, and the number of accounts converting to these new technologies. As noted by KPL, such impacts may be captured within the uncertainty ranges of its forecast.

The Panel understands that a more flexible approach to forecasting and utility planning is preferable, allowing adjustments based on observed trends and significant changes. The Panel notes that, based on the current evidence filed by KPL and KCFN, both forecasts indicate that peak demand is likely to rise in the future beyond KPL's existing capacity. This suggests that KPL needs to consider taking further actions to ensure it can reliably serve that load. As KCFN's plans start to solidify, the Panel suggests that KCFN communicate and collaborate with KPL to ensure alignment in future electricity planning. This collaboration will be crucial in aligning community aspirations with practical capacity planning and ensuring that both parties are adequately prepared for future developments.

Consideration of BC's energy objectives is required when deciding whether to accept or reject a resource plan. While the Panel acknowledges KCFN's submission that KPL's proposed plan does not advance or support BC's energy objectives, it is unclear what applicable objectives KCFN suggests are not met, and we do not find KPL's Resource Assessment Report to be inconsistent with BC's energy objectives.

Regarding KCFN's submission that KPL be required to retain a professional engineer for long-term planning, the Panel notes that there is no specific requirement in Directive 7 of Order G-302-22 or the BCUC Resource Planning Guidelines stating that long-term planning must be conducted by a professional engineer. The Panel encourages enhanced collaboration between KPL and KCFN, particularly on load forecasting matters, and emphasizes the importance of focusing on how to best meet future demand together.

# 3.0 Is KPL's Proposed Capacity Upgrade a Preferable Approach to Meet Its Peak Demand Forecast?

The limitation to KPL's system is the maximum peak demand allowed by BC Hydro under the Electrical Service Agreement (ESA), which is currently capped at 500 kW, and the design limit of the 30 T fuse, which has a physical limit of 561 kW.<sup>60</sup> Therefore, one of KPL's plans to meet peak demand forecasts is to increase capacity at the BC Hydro POI to address this issue.<sup>61</sup>

In July 2021, KPL applied for a capacity increase to 750 kW, but BC Hydro suggested a costly upgrade to threephase systems.<sup>62</sup> However, KPL states that verbal communication with BC Hydro suggests this capacity increase can be achieved within the existing one-phase configuration,<sup>63</sup> with achieved capacity estimates ranging from 700 to 1,000 kW.<sup>64</sup> Both KPL and BC Hydro are advancing engineering studies and cost estimates.<sup>65</sup> KPL plans to consult customers when reliable information is available, aiming to concurrently seek BCUC approval for the capacity upgrade.<sup>66</sup> KPL notes that the lead time for implementation of capacity upgrade is uncertain but likely more than one year.<sup>67</sup>

# Positions of the Parties

<sup>&</sup>lt;sup>60</sup> Exhibit B-1, p. 14.

<sup>&</sup>lt;sup>61</sup> Ibid., p. 15.

<sup>62</sup> Ibid.

<sup>63</sup> Ibid.

<sup>&</sup>lt;sup>64</sup> Exhibit B-2, p. 2.

<sup>65</sup> Ibid.

<sup>&</sup>lt;sup>66</sup> Exhibit B-3, KPL's response to BCUC IR 10.1.

<sup>&</sup>lt;sup>67</sup> Ibid., KPL's response to BCUC IR 10.7.

KPL submits that the simplest solution to increase peak demand capacity is to complete the capacity upgrade, which could raise the capacity from 550 kW to over 1,000 kW, exceeding the highest 10-year forecast peak demand without needing further upgrades.<sup>68</sup>

KPL states that capacity upgrade studies have been ongoing for over 18 months, and early indications suggest a significant capacity increase is possible, though cost estimates are not finalized. Based on an order of magnitude cost of \$250,000, KPL estimates that this would raise the tariff by \$0.014 per kWh. This rate increase may be offset in future by higher electricity consumption from facilities such as the Chamiss Bay camp.<sup>69</sup>

KCFN agrees with KPL that the proposed capacity upgrade is the simplest solution for increasing peak demand capacity, assuming feasibility. However, KCFN argues that the capacity upgrade represents a significant change, requiring professional engineering studies before BCUC acceptance.<sup>70</sup> Therefore, KCFN requests the BCUC reject the Application, and direct:<sup>71</sup>

- KPL to conduct professional engineering studies on the capacity upgrade's feasibility;
- BC Hydro to review these studies and provide feedback; and
- KPL to submit an updated resource assessment report within six months, including an updated short circuit study, an updated single-line diagram, and professional assurance of no safety risks from a high neutral voltage or fault conditions.

In its reply, KPL argues that KCFN's request for a new resource assessment plan within six months, including a feasibility study for the capacity upgrade, should be dismissed.<sup>72</sup> KPL explains that the current status of the capacity upgrade is sufficient for the Resource Assessment Report to be accepted and that the next regulatory step is for KPL to file a Certificate of Public Convenience and Necessity (CPCN) for the capacity upgrade.<sup>73</sup> KPL submits that if the capacity upgrade proves unfeasible, it would collaborate with KCFN and other customers to identify alternatives to be included in a new resource assessment report within the timeframe specified by BCUC.<sup>74</sup>

KPL also opposes KCFN's request for the BCUC to direct BC Hydro to review KPL's engineering studies. KPL argues that since BC Hydro is not an intervener in this proceeding, it should not be directed by the BCUC to conduct such a review.<sup>75</sup> Furthermore, KPL believes that requiring BC Hydro to review the work of independent third-party engineers on the KPL system would be highly unusual and unnecessary.<sup>76</sup>

# 3.1 Are There Any Alternatives to the Capacity Upgrade?

KPL proposes a second means of meeting the 10-year forecast demand increases by limiting demand to 550 kW by promoting self-generation and implementing restrictions on high-demand facilities,<sup>77</sup> targeting a 10%

<sup>&</sup>lt;sup>68</sup> KPL Final Argument, p. 12.

<sup>&</sup>lt;sup>69</sup> Ibid., p. 14.

<sup>&</sup>lt;sup>70</sup> KCFN Final Argument, para 18, p. 6.

<sup>&</sup>lt;sup>71</sup> Ibid., para 31, p. 9.

<sup>&</sup>lt;sup>72</sup> KPL Reply Argument, p. 13.

<sup>&</sup>lt;sup>73</sup> Ibid., p. 13.

<sup>&</sup>lt;sup>74</sup> Ibid., p. 11.

<sup>&</sup>lt;sup>75</sup> Ibid., p. 12.

<sup>&</sup>lt;sup>76</sup> Ibid., p. 13.

<sup>&</sup>lt;sup>77</sup> Exhibit B-1, p. 16.

reduction by 2034.<sup>78</sup> KPL plans to consult KCFN and SD 84 about these limits<sup>79</sup> but notes that there have been no recent developments in consultations with KCFN and SD 84 regarding peak demand limiting options.<sup>80</sup>

# Positions of the Parties

KPL states that the capacity upgrade, which KPL can undertake independently, appears to be the more reliable and cost-effective solution compared to the alternative (i.e., limiting peak demand from customers). KPL further explains that negotiations and consultations with KCFN about limiting peak demand would likely be lengthy and costly.<sup>81</sup>

KCFN's final argument refers to the requirement under the UCA that utilities consider demand-side measures.<sup>82</sup>

In its reply, KPL states that for the KCFN Houpsitas account, the KCFN distribution system, which directly interacts with electricity consumers, should provide Demand Side Management (DSM), not KPL. KPL says it would need BCUC approval before making significant expenditures on such measures. As part of reconciliation and reducing electricity consumption, KPL explains that BC Hydro, a crown corporation, might offer its DSM to KCFN Houpsitas. Since BC Hydro is the sole electricity supplier to KPL, reducing KPL's electricity demand could benefit BC Hydro. However, KPL mentions that this is an issue for KCFN and BC Hydro to explore together. For other accounts, where electricity costs are high, KPL expects customers to independently adopt DSM. KPL states that if future demand nears its capacity without capacity increases, KPL would explore DSM with significant customers.<sup>83</sup>

## Panel Discussion

The Panel supports KPL's approach to the capacity upgrade, considering it the preferable approach to meet its peak demand forecast and address the capacity limit at BC Hydro POI.

KPL and KCFN agree that a capacity upgrade is the simplest and most effective solution to meeting future load growth. The Panel acknowledges the different views regarding the capacity upgrade but notes that the issues are most appropriately addressed during a future CPCN proceeding.

As part of the Application, KPL offered an alternative solution to reduce peak demand, which could be classified as DSM. The Panel acknowledges that KPL is reluctant to prioritize DSM at this time partly due to the length and complexity of such proposals. The Panel recognizes KCFN's submissions that section 44.1 of the UCA includes requirements to file information on DSM. To offer clarity on the DSM requirements under the UCA in this case, the Panel notes that section 3 of the DSM Regulation<sup>84</sup> sets out the minimum DSM measures that must be included in a plan to be considered "adequate for the purposes of section 44.1 (8) (c) of the [UCA]". However, there is no requirement for KPL to address section 3 of the DSM Regulation as it serves fewer than 10,000 customers.<sup>85</sup>

The Panel therefore concurs with both parties on the preferred approach, making the capacity upgrade the preferable option to address growth in demand at this time. The Panel recognizes that the timing of the capacity upgrade will be subject to the utility's judgment based upon the facts available at the time. As noted in section 2

<sup>&</sup>lt;sup>78</sup> Ibid., p. 18.

<sup>&</sup>lt;sup>79</sup> Ibid., p. 21.

<sup>&</sup>lt;sup>80</sup> Exhibit B-3, KPL's response to BCUC IR 11.2.

<sup>&</sup>lt;sup>81</sup> KPL Final Argument, p. 14.

<sup>&</sup>lt;sup>82</sup> KCFN Final Argument, pp. 2-3.

<sup>&</sup>lt;sup>83</sup> KPL Reply Argument, p. 5.

<sup>&</sup>lt;sup>84</sup> https://www.bclaws.gov.bc.ca/civix/document/id/complete/statreg/10\_326\_2008.

<sup>&</sup>lt;sup>85</sup> Per section 2(2)(b).

of this decision, the Panel acknowledges the need for flexibility in addressing future demand uncertainties and encourages KPL to continue working with KCFN and other stakeholders to ensure alignment and effective planning for the future. In response to KCFN's concerns about needing more advanced studies and updating the resource assessment report, the Panel observes that a long-term resource plan would not be expected to include highly detailed engineering or feasibility studies regarding the utility's plans to meet its future demand.

# 4.0 Is Accepting the Resource Assessment Report in the Public Interest?

## Positions of the Parties

KCFN submits that it does not take a position on whether KPL has met the filing requirements of section 44.1(2) of the UCA and states that it would not be in the public interest to accept the Resource Assessment Report at this time, as KPL's existing Electrical Service Agreement (ESA) limit with BC Hydro is not sufficient to accommodate planned future demand growth.<sup>86</sup>

In its reply, KPL explains that a resource assessment is a planning document for alternative supply options. A CPCN is the proceeding under which a supply alternative, such as a capacity upgrade, is subject to detailed regulatory oversight. The CPCN regulatory oversight ensures that the public interest, including financial impacts on utility customers, is fully canvassed and considered prior to regulatory approval.<sup>87</sup>

## Panel Determination

Pursuant to section 44.1(6) of the UCA, the Panel determines that carrying out the Resource Assessment Report is in the public interest, and therefore accepts the Resource Assessment Report as adjusted to include load from the Chamiss Bay camp.

In making this determination, we conclude that KPL has provided sufficient information on how its system demand will grow in the future and has demonstrated a reasonable basis for its approach to forecasting future demand. Additionally, the Panel acknowledges that KPL has outlined how it plans to meet demand forecast alongside alternative options. Based on the evidence available at this time, the Panel is convinced that the capacity upgrade is the preferable option and provides a superior alternative compared to other options.

## 5.0 Should KPL file Another Resource Assessment Report?

During the proceeding, the Panel asked parties whether KPL should be required to submit another resource assessment report to the BCUC in the future, under what circumstances, and whether there are alternative processes to ensure continuous planning for KPL's system.<sup>88</sup>

## Positions of the Parties

KPL states that it should not be required to submit another resource assessment report in the near future. KPL clarifies that if the CPCN for the capacity upgrade is either approved or rejected, it will provide the necessary analysis and BCUC considerations regarding the benefits and costs of the capacity upgrade compared to other alternatives. Additionally, KPL notes that if it does not file a CPCN, both KPL and its customers will need time to

<sup>&</sup>lt;sup>86</sup> KCFN Final Argument, para 28, p. 8.

<sup>&</sup>lt;sup>87</sup> KPL Reply Argument, p. 6.

<sup>&</sup>lt;sup>88</sup> Exhibit A-11, dated May 10, 2024, p. 1.

explore alternative options, the economic viability of which is currently uncertain. Should a CPCN not be filed within two years, KPL states it will then submit a new resource assessment report.<sup>89</sup>

KCFN submits that the BCUC should reject KPL's Resource Assessment Report and require KPL to submit a new resource assessment report within six months. This new report should examine the feasibility of KPL's proposed capacity upgrade to better enable decisions on how best to address the pending capacity deficit.<sup>90</sup>

In its reply, KPL states that KCFN's argument for a new resource assessment report within six months, including an affirmative feasibility study for the capacity upgrade, should be dismissed.<sup>91</sup> KPL argues that the proposed sixmonth timeline is unrealistic given the required effort and KPL's limited ability to enforce such a schedule on BC Hydro and other independent third parties. Furthermore, KPL explains that multiple resource assessment filings, potentially followed by delayed CPCN filings, would not be cost-effective. As a small utility with high electricity tariffs, KPL submits that delays and multiple regulatory proceedings would lead to noticeable increases in tariff rates for its customers.<sup>92</sup>

KPL explains that if further analysis of the technical and economic aspects of the capacity upgrade reveals that the project is not feasible, KPL suggests that the BCUC should determine whether another resource assessment report or alternate proceeding is necessary within at least two years. KPL states it would work with KCFN and its other customers to inform the alternatives to be included in new resource assessment report within the timing as specified by the BCUC.<sup>93</sup>

## Panel Determination

The Panel determines that KPL is not required to file another resource assessment report at this time. Considering the negligible benefit of such an update, and the associated costs, including the potential for rate impact associated with regulatory filings, the Panel concludes that neither party would benefit from another resource assessment report at this time. The Panel emphasizes that KPL should retain the flexibility to manage its operations and make strategic decisions based on its assessment of feasibility and need.

KPL has indicated that if it does not file a CPCN for the capacity upgrade within two years, it would file a further resource assessment report. However, the BCUC refrains from making a directive to compel KPL to file another resource assessment report under these circumstances, and instead directs KPL to inform the BCUC and interveners in this proceeding if it finds that the proposed capacity upgrade is infeasible or unnecessary, and what, if any, next steps it proposes.

**DATED** at the City of Vancouver, in the Province of British Columbia, this 2<sup>nd</sup> da

day of August 2024.

Original signed by:

M. Jaccard Panel Chair/Commissioner

Original signed by:

<sup>&</sup>lt;sup>89</sup> KPL Final Argument, p. 16.

<sup>&</sup>lt;sup>90</sup> KCFN Final Argument, para 3, p. 1.

<sup>&</sup>lt;sup>91</sup> KPL Reply Argument, p. 13.

<sup>&</sup>lt;sup>92</sup> KPL Reply Argument, p. 13.

<sup>&</sup>lt;sup>93</sup> Ibid., pp. 10-11.

C. M. Brewer Commissioner

Original signed by:

E. A. Brown Commissioner

# Kyuquot Power Limited Resource Assessment Report

# LIST OF ACRONYMS

Acronym	Description
Application	KPL's application to the BCUC for acceptance of its Resource Assessment Report
BC Hydro	British Columbia Hydro and Power Authority
BCUC	British Columbia Utilities Commission
DSM	Demand Side Management
ESA	Electrical Service Agreement
IR	Information Request
KCFN	Ka:'yu:'k't'h' / Che:k'tles7et'h' First Nations
KPL	Kyuquot Power Limited
POI	Point of Interconnection
SD 84	School District 84
SPEC	Site Power Engineering Consultant
UCA	Utilities Commission Act

# Kyuquot Power Limited Resource Assessment Report

#### **EXHIBIT LIST**

# Exhibit No. Description

#### **COMMISSION DOCUMENTS**

A-1	Letter dated November 15, 2023 – BCUC appointment of a panel for the review of the Kyuquot Power Ltd. Resource Assessment Report
A-2	Letter dated December 7, 2023 – BCUC Order G-333-23 establishing a regulatory timetable with public notice
A-3	Letter dated December 7, 2023 – BCUC invitation to KCFN to intervene
A-4	Letter dated January 12, 2024 – BCUC Order G-7-24 establishing a further regulatory timetable
A-5	Letter dated January 24, 2024 – BCUC confirming timetable and scope of issues
A-6	Letter dated January 31, 2024 – BCUC Information Request No. 1 to KPL
A-7	Letter dated March 6, 2024 – BCUC Order G-60-24 establishing an amended timetable
A-8	Letter dated March 27, 2024 – BCUC response to KPL's proposal regarding notice of intent to file Rebuttal Evidence
A-9	Letter dated March 28, 2024 – BCUC Information Request No. 1 to KCFN on Intervener Evidence
A-10	Letter dated April 17, 2024 – BCUC Order G-115-24 establishing an amended timetable
A-11	Letter dated May 10, 2024 – BCUC providing guidance for final arguments
A-12	Letter dated May 17, 2024 – BCUC response to KCFN request to file new evidence

#### **APPLICANT DOCUMENTS**

B-1	KYUQUOT POWER LTD. (KPL) - Resource Assessment Report dated October 26, 2023
B-2	Letter dated January 17, 2024 – KPL submitting updated Resource Assessment Report
B-3	Letter dated February 27, 2024 – KPL submitting responses to BCUC Information Request No. 1
B-4	Letter dated February 27, 2024 – KPL submitting responses to KCFN Information Request No. 1
B-5	Letter dated March 22, 2024 – KPL submitting notice of intent to file Rebuttal Evidence
B-6	Letter dated March 28, 2024 – KPL submitting Information Request No. 1 to KCFN on Intervener Evidence
B-7	Letter dated April 30, 2024 – KPL submitting no reply on Intervener Evidence

#### **INTERVENER DOCUMENTS**

C1-1	Scнool District 84 (SD84) - Letter dated December 15, 2023 Request to Intervene by Deane Johnson
C2-1	Ka:'YU:'K'T'H'/CHE:K'TLES7ET'H' FIRST NATIONS (KCFN) - Letter dated January 3, 2024 Request to Intervene by Cynthia Blackstone
C2-2	Letter dated January 19, 2024 – KCFN submitting notice of intent to file Intervener Evidence
C2-3	Letter dated February 7, 2024 – KCFN Information Request No. 1 to KPL
C2-4	Letter dated March 5, 2024 – KCFN submitting extension request to file Intervener Evidence
C2-5	Letter dated March 14, 2024 – KCFN submitting Intervener Evidence
C2-5-1	Letter dated March 14, 2024 – KCFN submitting Intervener Evidence updated
C2-5-2	Letter dated March 15, 2024 – KCFN submitting Intervener Evidence correction
C2-6	Letter dated April 17, 2024 – KCFN requesting extension for submitting response to Information Request No. 1 on Intervener Evidence

- C2-7 Letter dated April 26, 2024 KCFN submitting responses to BCUC and KPL Information Requests No. 1 on Intervener Evidence
- C2-8 Letter dated May 16, 2024 KCFN submitting request to file new evidence