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**BRITISH COLUMBIA
UTILITIES COMMISSION**

**ORDER
NUMBER G-106-13**

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

and

**The Corporation of the City of Nelson
Service Extension Complaint by the Kootenay Lake Estates Development Corporation
Compliance Filing**

BEFORE: L.F. Kelsey, Commissioner
D.M. Morton, Commissioner July 11, 2013
B.A. Magnan, Commissioner
C. van Wermeskerken, Commissioner

ORDER

WHEREAS:

- A. On April 11, 2012, Kootenay Lake Estates Development Corporation (KLE) filed a complaint with the British Columbia Utilities Commission (Commission) against the City of Nelson's electrical utility (Nelson Hydro). The complaint pertains to a service extension upgrade to KLE's Kootenay Lake Village development;
- B. On May 9, 2013, the Commission issued Order G-76-13 which directed:
 - 1. Nelson Hydro may upgrade only a portion of the existing line to three -phase however a Cold Load Pick Up Margin greater than 20 percent must be maintained.
 - 2. Nelson Hydro is to provide a Compliance Filing to the Commission and Kootenay Lake Estates Development Corporation (KLE) by May 24, 2013 as outlined in the attached Reasons for Decision.
 - 3. After receipt and review of the Compliance Filing, the Commission will determine the division of costs of the line upgrade that are attributable to each of Nelson Hydro and KLE.
- C. On May 23, 2013, Nelson Hydro requested to submit the Compliance Filing by May 29, 2013, due to conflicts in the availability of the City of Nelson's staff and to ensure accuracy of the information;
- D. On May 24, 2013, the Commission issued Order G-86-13 which directed Nelson Hydro to submit the Compliance Filing by May 29, 2013, and provided an opportunity for KLE to provide comments on the upgrade cost by June 7, 2013;

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- E. On May 29, 2013, Nelson Hydro submitted its Compliance Filing to the Commission;
- F. On June 3, 2013, KLE provided comments;
- G. On June 12, 2013, Nelson Hydro provided a response to KLE's June 3 comments and requested an opportunity to comment on two issues in KLE's June 3 submission. Also on June 12, 2013, KLE responded to Nelson Hydro's June 12 comments. On June 13, 2013, Nelson Hydro withdrew its request to comment on KLE's June 3, 2013 submission.

NOW THEREFORE pursuant to section 83 of the *Utilities Commission Act* and as set out in the attached Reasons for Decision, the Commission orders that Nelson Hydro is responsible for 48 percent and Kootenay Lake Estates Development Corporation is responsible for 52 percent of the costs of the project to upgrade a portion of the line from single to three phase.

DATED at the City of Vancouver, in the Province of British Columbia, this 12th day of July 2013.

BY ORDER

Original signed by:

D.M. Morton
Commissioner

Attachment

The Corporation of the City of Nelson
Service Extension Complaint by the Kootenay Lake Estates Development Corporation
Compliance Filing

REASONS FOR DECISION

1.0 BACKGROUND

On April 11, 2012, Kootenay Lake Estates Development Corporation (KLE) filed a complaint with the British Columbia Utilities Commission (Commission) against the City of Nelson's electrical utility (Nelson Hydro) regarding a service extension to KLE's Kootenay Lake Village development.

Following extensive correspondence between Nelson Hydro, KLE and the Commission, on May 9, 2013, the Commission issued Order G-76-13 and the attached Reasons for Decision which directed:

1. Nelson Hydro may upgrade only a portion of the existing line to three-phase however a Cold Load Pick Up Margin greater than 20 percent must be maintained;
2. Nelson Hydro is to provide a Compliance Filing to the Commission and KLE to include:
 - Results from Nelson Hydro measuring the actual load on the line in winter 2012;
 - Calculations showing:
 - The existing single-phase line capacity;
 - The range of peak loads that correspond to Cold Load Pick Up Margins ranging from 20-30% for:
 - i. the existing single-phase line;
 - ii. a line where the complete length of the line has been upgraded to three-phase; and
 - iii. a line where only a portion has been upgraded to three - phase (Option 2 from ZE Engineering's study);
 - An explanation of why Phases 1 and 2 could be serviced on the existing single-phase line if the maximum load of these Phases is 388 KW and 31 lots are included in the development;
 - Any other information NH considers will provide clarity;
 - A revised cost estimate for a partially upgraded three-phase line as per Option 2 in ZE Engineering's study;
 - Calculations showing the portion of this cost caused by Phases 1 and 2; and
 - Calculations showing the portion of this cost caused by Phase 3.

3. After receipt and review of the Compliance Filing, the Commission will determine the division of costs of the line upgrade that are attributable to each of Nelson Hydro and KLE.

On May 24, 2013, the Commission issued a further Order, G-86-13, which extended the deadline for Nelson Hydro's Compliance Filing to May 29, 2013, and provided KLE an opportunity to respond to that submission.

2.0 NELSON HYDRO's COMPLIANCE FILING and KLE's RESPONSE

Nelson Hydro provided all information directed for inclusion in the Compliance Filing as follows:

2.1 Results from Nelson Hydro measuring the actual load on the line in winter 2012

Nelson Hydro measured the actual load on the line from January 14, 2013 to February 4, 2013 to be approximately 57.6 kVA. Nelson Hydro notes that the winter was mild (the coldest temperature during monitoring was about -9°C) and expects the KLE load would have been about 70.3 kVA at -20°C with the current build out. Nelson Hydro extrapolated the load at -20°C by estimating a 2% increase in demand for each °C reduction in temperature. (Nelson Hydro, May 29, 2013, p. 1)

In response KLE states "the technical results of the line reading support entirely our submission that the actual demands being made by the homes built are significantly below the design parameters submitted by our original electrical engineer...[and] unequivocally dismiss [Nelson Hydro's] claim that the existing homes went beyond the design parameter and used up the design approved 388KVA." (KLE, June 3, 2013, pp. 1-2)

2.2 Peak load calculations

Nelson Hydro provided the following range of peak loads that correspond to Cold Load Pick Up Margins ranging from 20-30%:

	Peak Loads		
Line Option	Existing Line	Complete length of the line upgraded to three-phase	Portion upgraded to three-phase (Option 2 from ZE Engineering's study)
20% Cold Load Pick Up Margin	98 kVA, 12 lots	1,468 kVA, 183 lots	264 kVA, 44 lots
30% Cold Load Pick Up Margin	48 kVA, 6 lots	712 kVA, 89 lots	214 kVA, 38 lots

Nelson Hydro converted the kVA figures to number of lots by estimating 8 kVA/lot. The actual load measurements equated to 6.4 kVA/lot but Nelson Hydro estimated 8 kVA/lot to allow for future load growth ("e.g. adding hot tubs could add 2 to 4 kVA per service.") (May 29, 2013, pp. 1-2)

In response, KLE expresses frustration at "Nelson Hydro's repeated attempts to exaggerate the future technical issues and demands. There is only one hot tub in the community and none are currently planned. In our opinion, arguing a need to upgrade in [sic] the electrical infrastructure on an assumption that everyone will be getting a tub in the future is irrational." (KLE, June 3, 2013, p. 2)

2.3 Explanation of why Phases 1 and 2 could be serviced on the existing single-phase line if the maximum load of these Phases is 388 KW and 31 lots are included in the development

Nelson Hydro states:

“phases 1 & 2 (388 KW) could be accommodated with the existing single phase line based on the voltage regulator capacity of 50 Amps per phase. [Cold Load Pick Up Margin] was originally not considered at that time which is a lower limiting factor. This oversight became moot shortly after the single phase proposal was provided to the developer as the need for upgrade to three phase became readily apparent as the overall development was larger than originally forecasted. Phases 1 & 2 at 388 kW (27 Amps) would have when combined with the existing 21 Amps would have [sic] been the limit of the voltage regulator 50 Amp capacity hence any further load additions would require line upgrades.” (Nelson Hydro, May 29, 2013, pp. 2-3)

2.4 Other information to provide clarity

Nelson Hydro notes that the upgrade project is one single project and the division of costs between Phases 1, 2 and 3 relies on accounting rather than separate construction costs. (Nelson Hydro, May 29, 2013, p. 3)

Nelson Hydro also suggests steps for moving forward with the process. They suggest that the only practical way forward is for the upgrade to be built as soon as possible because they have spent significant time discussing KLE providing future security for the project but the discussions have been unsuccessful. Nelson Hydro suggests the following steps to move forward:

- After the Commission completes its allocation of costs, Nelson Hydro will provide an estimate to KLE with any cost adjustment as directed by the Commission;
- Construction will not commence until KLE pays the estimate;
- Upon completion of the construction the project costs will be trued up so KLE pays only its share of the actual construction costs.

Nelson Hydro further requests the Commission allocate the division of costs for the upgrade on a percentage basis so that the true up with actual construction costs is easily done. As well, Nelson Hydro requests the Commission implement a specific timeline for the developer to pay the construction estimate. (Nelson Hydro, May 29, 2013, p. 3)

In response, KLE suggests the costs be divided based on the ratio of the lots Nelson Hydro has approved for Phase 1 / 2, i.e. 32 of the 46 lots. Regarding Nelson Hydro's request for KLE to pay immediately, KLE notes that it and the Strata Corporations for Phases 1 / 2 and 3 have comprehensive claims against Nelson Hydro, which they are pursuing through other channels. In KLE's view, it is unfair “that given the much broader commercial dispute that Nelson Hydro be provided a footing to leverage a single claim item.” (KLE, June 3, 2013, p. 3)

KLE also requested clarification on the issue of service to the owners because Nelson Hydro appears to take the position that unless the developer pays for the upgrade immediately there will be no upgrade, which may mean a continuance of loss of service for lot owners. (KLE, June 3, 2013, pp. 3-4)

2.5 Revised cost estimate for a partially upgraded three-phase line

Nelson Hydro provided a revised cost estimate of \$73,591.04, pre-tax, including contingency. Nelson Hydro notes that this estimate does not include costs from TELUS to transfer their equipment from the old poles to the new and they anticipate TELUS will bill the developer directly for these costs. (Nelson Hydro, May 29, 2013, p. 3)

Nelson Hydro further states “[i]f the developer has a licensed line contractor who can build the project at a lower cost and is suitable to Nelson Hydro, by all means, we could entertain using them. This project will most likely be put out for a contractor anyway, as it is too large for our line crew.” (Nelson Hydro, May 24, 2013 email attached to May 29, 2013 filing)

In response, KLE attaches an estimate prepared by Martech Electrical Systems Ltd. for \$27,600 plus taxes, for installing two new poles, re-conductoring, and upgrading from single phase to three phase, but excluding work Nelson Hydro will have to complete such as tie in, brush removal and excavation. KLE notes the cost difference between the two estimates is dramatic and continues to raise questions about pole upgrades that were completed previously for TELUS. (KLE, June 3, 2013, p. 2)

It is not indicated in evidence whether Martech Electrical Systems would be considered a licensed line contractor suitable to Nelson Hydro.

2.6 Calculations showing the portion of this cost caused by Phases 1, 2, and 3

Nelson Hydro submits the following:

“Assuming a [Cold Load Pick Up] Margin of 20% the existing single phase line can support 12 lots in KLE. Thus the upgrade is being driven by $41 - 12 = 29$ of the KLE lots.

Phase 1 & 2: $15 / 29 * \$73,591.04 = \$38,064.33$

Phase 3: $14 / 29 * \$73,591.04 = \$35,526.71$.” (May 29, 2013, p. 3)

COMMISSION DETERMINATION

By Order G-76-13 and the attached Reasons for Decision, the Commission determined that Nelson Hydro may upgrade only a portion of the existing line to three-phase however a Cold Load Pick Up Margin greater than 20 percent must be maintained. The Commission acknowledged that there was a lack of clarity about the “trigger point” at which an upgrade to a three-phase line is required. Given the requirement that a minimum of 20 percent Cold Load Pick Up Margin be maintained, and based on the data provided by Nelson Hydro, the “trigger point” when a portion of the existing line must be upgraded to three-phase is between 48 and 98 kVA. In this case there is no specific “trigger point” but rather a range of peak loads that correspond to the minimum requirement of 20% Cold Load Pick up Margin and a 30% Cold Load Pick Up Margin; in this case there is more appropriately a “trigger range” than a point.

Nelson Hydro measured the actual load on the line in winter 2012 to be 57.6 kVA although they note that it was a mild winter and expected loading at -20°C is expected to be 70.3 kVA. The actual measurement of 57.6 kVA is within the range of 48-98 kVA which necessitates an upgrade of a portion of the line from single to three-phase at this time. Thus, the Commission supports Nelson Hydro proceeding with construction of the upgrade as soon as possible.

Regarding the timing of payment, the Commission stated in the Reasons for Decision attached to Order G-76-13:

“the Commission recognizes that it is normal and preferable utility practice in British Columbia for the utility to require the contribution from the developer prior to project construction to avoid a situation where the developer no longer has a legal obligation to the development. If NH and KLE wish to make security arrangements, it is a matter between the two parties. The Commission prefers payment to be made as soon as possible after the division of costs is determined by the Commission.” (Appendix A to Order G-76-13, p. 15)

Based on this determination, the Commission Panel finds Nelson Hydro’s proposal, as set out below, to be reasonable:

- provide an estimate to KLE with any cost adjustment as directed by the Commission;
- construction will not commence until KLE pays the estimate;
- upon completion of the construction the project costs will be trued up so KLE pays only its share of the actual construction costs.

Regarding the division of costs, the Commission previously determined:

“Despite it being KLE’s obligation to pay for the upgrade under Bylaw 18(f), given that NH committed to servicing Phases 1 and 2 without a line upgrade, the Commission finds it reasonable that the costs of the upgrade caused by Phases 1 and 2 should be split between NH and KLE. The Commission will determine this split after NH’s Compliance Filing is submitted by May 24, 2013 ... KLE should have applied for electrical service for Phase 3 before selling the 14 lots if it wished to include all costs in these sales. KLE is therefore fully responsible for the costs to upgrade the line for the need caused by Phase 3.” (Appendix A to Order G-76-13, p. 14)

The Commission Panel finds it reasonable to allocate the costs on a percentage basis as requested by Nelson Hydro to facilitate the true-up of accounting. Phases 1 / 2 consists of 32 lots and Phase 3 consists of 14, for a total of 46 lots. Based on the Commission’s previous determination, 14 lots (Phase 3) are the full responsibility of KLE and responsibility for 32 lots (Phases 1 / 2) should be split between Nelson Hydro and KLE.

Order G-76-13 set out a requirement that a minimum 20% Cold Load Pick Up Margin be maintained. Nelson Hydro’s data shows that the existing single phase line can support 12 lots at a 20% Cold Load Pick Up Margin. Thus, given that Nelson Hydro committed to servicing Phases 1 / 2 without a line upgrade, **the Commission finds that these 12 lots are the responsibility of Nelson Hydro.**

For the remaining 20 lots, while the Commission stated in the Reasons for Decision attached to Order G-76-13 “[i]n the Commission’s view, [Nelson Hydro]’s Bylaw 18(f) clearly sets out that the developer will pay the full net extension costs to extend service”, the Commission also stated at that time “the sequence of correspondence [between Nelson Hydro and KLE regarding the need for the upgrade] is confusing...a lack of clarity still exists.” Nelson Hydro’s explanation of why Phases 1 / 2 could be serviced on the existing single-phase line provided in the Compliance Filing does not clear up this confusion completely in the Commission’s view. Given that KLE has

made business decisions based on the information provided by Nelson Hydro, the Commission Panel finds it reasonable for Nelson Hydro to accept some responsibility for the cost of the upgrade associated with the remaining 20 lots in Phases 1 / 2. **The Commission Panel finds it reasonable that Nelson Hydro and KLE split the responsibility for the remaining 20 lots. Thus the percentage allocation of costs for the upgrade project is:**

Nelson Hydro: 12 lots + 10 lots = 22 lots/46 lots = 48%
KLE: 14 lots + 10 lots = 24 lots/46 lots = 52%

Nelson Hydro assumed 8 kVA/lot to convert the kVA figure for the range of peak loads that correspond to Cold Load Pick Up Margins of 20-30% to a number of lots. Nelson Hydro's actual line reading equated to 6.4 kVA/lot but they assumed 8 kVA/lot to allow for future load growth. KLE disputes this as exaggerating future demands. The Commission Panel finds it reasonable for Nelson Hydro to factor in some contingency for load growth at the lots, and that 8 kVA/lot is a reasonable number to ensure the system is upgraded to meet unknown future demands.

KLE also disputes the amount of the cost estimate for the project provided by Nelson Hydro. The Commission Panel does not find it appropriate for the Commission to determine an estimate for the cost of this project. Nelson Hydro is in the position to determine an appropriate estimate and has stated that the project would likely be put out for contract and that they would entertain using KLE's contractor. The final estimate and costs are to be determined between Nelson Hydro and KLE. However, in all cases, the Commission expects a public utility to undertake any capital project in the most cost effective way possible.

KLE clearly continues to have questions about pole upgrades that were previously completed for TELUS and how this cost factors into the estimate for the 3-phase upgrade. Regarding the continued dispute about the TELUS work, the Commission previously determined:

"the Commission is not persuaded that this played into this dispute at all. NH's evidence is that it has a Joint Use agreement with TELUS that covers line upgrades and the upgrades have been completed. As well, NH submits that this dispute is about the electrical service not the pole replacement for TELUS. The Commission accepts this evidence and finds that the TELUS upgrade has not played a part in the upgrade required for electrical service to the three Phases." (Appendix A to Order G-76-13, p. 15)

Given that KLE continues to have questions about the TELUS work, the Commission Panel directs Nelson Hydro to clearly explain to KLE, in writing:

- i. the specific work completed as part of the pole replacement/TELUS upgrade project referred to in the excerpt of Appendix A to Order G-76-13 above, including dates the work was completed;
- ii. the costs of that work;
- iii. who paid for that work;
- iv. any work remaining to complete that project;
- v. any work required by TELUS after Nelson Hydro completes the project contemplated in this decision (upgrading a portion of the existing single phase line to three phase); and
- vi. who will pay for the work included in (v) above.

Nelson Hydro should follow-up with KLE to ensure that it understands the written explanation.

In response to KLE's request for clarification on Nelson Hydro's apparent position that unless KLE pays for the upgrade immediately there will be no upgrade which may mean continued loss of service to lot owners, the Commission stated in the Reasons attached to Order G-76-13:

"This dispute is between NH and KLE, and NH had other options for recourse against KLE, through the courts or the Commission. The Commission sees no grounds for NH to refuse service to individual lot owners.

The Commission expects that in the future, NH will consider recourse directly with the developer, as it is the party obligated to pay for the upgrade, through the Commission or the courts, rather than involving individual Strata owners." (Appendix A to Order G-76-13, p. 16)

For clarity, this direction stands despite the Commission Panel finding Nelson Hydro's proposal that construction will not commence until KLE pays the estimate to be reasonable.