bcuc
British Columbia
Utilities Commission

Marija Tresoglavic
Acting Commission Secretary

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June 12, 2020

Sent via eFile

KPL – SAFETY AND RELIABILITY INVESTIGATION
EXHIBIT A2-10

Tanya L. DeAngelis LL.B
Chairperson & Director, Corporate Secretary
Synex International Inc.
tdeangelis@synex.com

Re: Kyuquot Power Ltd. – Investigation into the Safety and Reliability of the KPL System – Project No. 1599094 – Staff Submission – KCFN Summary of KPL Power Outage Timeline

Dear Ms. DeAngelis,

British Columbia Utilities Commission staff submit the following document for the record in this proceeding:

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN)
Summary of Kyuquot Power Outage Timeline & Decision Making
– January 2020 through March 2020
Dated April 23, 2020

Sincerely,

Original signed by:

Marija Tresoglavic
Acting Commission Secretary

/aci
Enclosure

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations

Summary of Kyuquot Power Outage Timeline & Decision Making – January 2020 through March 2020

Prepared by Sam Rogers, P.Eng., KCFN Asset Management Advisor, April 23, 2020

The information provided in this summary was obtained from review of email records, including attachments, for the identified time period. Applicable referenced emails, letters, and reports are attached to this summary.

Tuesday, January 7, 2020

TEBurns Engineering (TEBurns) gives email notice on behalf of Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN) to Synex International (Synex) of planned work on the powerline in Houpsitas. Work is planned to start Friday January 10th.

Wednesday, January 8, 2020

Power goes out to Kyuquot without notice around 10:45 am.

Thursday, January 9, 2020

Power restored to Kyuquot around 11:45 am. **(~25hr outage)**

KCFN CAO emails a letter to Synex outlining the rationale and reasons for installing an isolation switch on KCFN's powerline close to Houpsitas.

January 9-10, 2020

HB Energy and Synex representatives object to KCFN installing an isolation switch on KCFN's powerline close to Houpsitas within Treaty Settlement Land (TSL). The switch installation was planned by TEBurns to increase community safety. Objections from Synex are provided by email. Objections from HB Energy are provided via telephone conversations with TEBurns.

Friday, January 10, 2020

Coast Powerlines trucks and crew barge in to work on KCFN powerlines in Houpsitas.

KCFN issues a state of emergency due to powerline safety concerns.

Saturday, January 11, 2020

Coast Powerlines installs isolation switch S3 on TSL as directed by TEBurns and under TSBC Permit No. EL-965331-2020.

Sunday, January 12, 2020

Coast Powerlines replaces an overloaded transformer that had been observed glowing over Christmas 2019 holidays. Work done as directed by TEBurns.

KCFN lifts state of emergency due to powerline safety concerns.

KCFN emails notice to Synex and HB Energy that the operating permit over KCFN powerlines is now held by HighTide Energy, not HB Energy. HB Energy continues to hold the operating permit over the Kyuquot Power Ltd (KPL) powerline.

January 13-15, 2020

Coast Powerlines completes urgent life-safety work on powerline system in Houpsitas as directed by TEBurns. Work includes replacing two additional overloaded transformers and replacing a number of transformer fuses that were found to be oversized by as much as a factor of 10 times.

Tuesday, January 14, 2020

KCFN sends email to HB Energy requesting they remove all personal belongings and equipment being stored in a KCFN sea-can located in Houpsitas. KCFN offers to ship belongings and equipment back to HB Energy office in Gold River.

Thursday, February 6, 2020

TEBurns submits a safety incident report to Technical Safety BC (TSBC) and Synex identifying items of immediate concern on the KPL powerline running between Chamiss Bay and Kyuquot.

No immediate action is taken by Synex to address the identified safety concerns.

Friday, February 14, 2020

KCFN notify the BCUC by email of the filed TSBC safety incident report.

KCFN initiate filing of an official complaint against Synex (KPL) though the BCUC. While triggered by the immediate safety concerns, the complaint is based on long-standing operational concerns.

BCUC sends an email to Synex stating, "*…should KPL find that there is a need to de-energize the line,* ***residents*** *(including ones on outer islands within Strathcona Regional District)* ***should be notified prior to work commencing on the line.****"*

Monday, February 17, 2020 (Family Day STAT Holiday)

Power goes out to Kyuquot without notice being given to KCFN administration around 10:15 am.

Upon investigation it was determined Addy Power had de-energized the powerline to complete repair work on the KPL powerline between Chamiss Bay and Kyuquot.

Power restored to Kyuquot around 2:15pm. (**~4hr outage**)

Thursday, March 5, 2020

VIP Powerlines equipment and crews are barged in to work on KCFN powerlines in Houpsitas.

All planned work as directed by TEBurns.

Friday, March 6, 2020

Heavy snowfall in Houpsitas pushes the lead to a cut-out down until it contacts the crossarm. This causes a lighting arrester on KCFN line to blow. **Power goes out to Kyuquot and Ocluje at 9:24pm.**

Saturday, March 7, 2020

VIP Powerlines repairs damaged KCFN line in morning.

Addy Power hangs flagging on KPL powerline between Chamiss and Kyuquot in advance of planned helicopter logging over the powerline by Interfor Corporation (Interfor).

Power is restored to Ocluje by 1pm.

Power is restored to Kyuquot around 7:30pm after Addy Power replaces blown fuse at Point of Interconnection (POI) with BC Hydro line near Ocluje. Size of fuse installed unknown. **(~22hr outage**)

Sunday, March 8, 2020

Interfor begins helicopter logging over KPL powerlines.

Power goes out to Kyuquot without notice around 1 pm.

Interfor continues helicopter logging over powerlines until the end of the day.

KCFN's CAO sends email notifying Interfor Operations Manager for area of the power outage situation and states that KCFN's Administration, "*…has had little information about the Heli logging in the area and NO notification of the schedule."* and "*KCFN is very concerned about Interfor's operation in our area. We expect the heli logging operation to cease until proper procedures are followed and our concerns addressed*."

Monday, March 9, 2020

Interfor temporarily suspends helicopter logging over KPL powerlines.

Power is restored to Kyuquot around 8pm after Addy Power replaces blown fuse at POI. Size of fuse installed unknown. **(~31hr outage**)

Tuesday, March 10, 2020

Power goes out to Kyuquot without notice around 11:15 am.

Addy Power sends an email to Synex asking, "*Just wondering if Synex/kyuquot Power was given any information on the work being done in the Village of Kyuqout with regards to service upgrades to the Village system?"*

Synex sends an email to Addy Power, cc'ing Interfor and KCFN stating:

1. "*No authorization [from KCFN was] requested for any work."*
2. *"Interfor asked our authorization for their ongoing work. They are not the ones to be blamed. They know the process of what they are doing."*

TEBurns Engineering sends an email to KCFN, cc'ing Synex and BCUC stating that a 10T fuse is not adequate to support the existing system load. The recommendation from TEBurns Engineering was for a *"…**minimum 25T** and **preferably a 40T** [fuse].*" TEBurns recommends to Synex that the request to BC Hydro to increase the fuse size should come from KPL.

TEBurns sends an email to Synex, cc'ing Addy Power, BCUC, TSBC and KCFN stating:

1. *"…VIP did not cause the outage in the village this morning…"*
2. ***"The ongoing work I am overseeing as the Engineer of Record for the Nation does not involve any load additions in the village."***
3. *"Given that the village is a separate HV Network I do not believe we would need to seek authorization from KPL to maintain or operate our network."*
4. *"KPL reads the village primary meter monthly so if there have been load increases you would have seen it in the readings."*
5. *"As per my previous notes, I believe **the out[age] today is the result of inadequate fuse sizing** somewhere between Fair Harbour and the BC Hydro Point Of Interconnection, possibly the fusing at the BC Hydro POI."*
6. ***"It would be helpful moving forward if I could have an engineering contact at Synex that I could deal with directly on technical inter-utility issues."***

TEBurns sends an email to BC Hydro stating:

1. "The village in Kyuquot has been experiencing outages lately that have no obvious fault."
2. "This is a new development and **no new load has been added in the village** so **something has changed upstream on the KPL line or the BC Hydro POI**.
3. We will require a **minimum of a 25T fuse** in order to hold the load; a 40T would be better but that may cause problems with you[r] upstream coordination.

<u>Wednesday, March 11, 2020</u>

Interfor's Operations Manager notifies KCFN by email that, "*I understand the Kyuquot power outages had nothing to do with Interfor's operations…we intend to resume heli-logging in the other blocks [over powerlines] again tomorrow morning."*

Addy Power sends an email to TEBurns, Synex, TSBC, BCUC, and KCFN stating, *"…B.C. Hydro has not been able to increase the fuse size to prevent overload power outage the fuse size is still at this time a 10t fuse…"*

Power is restored to Kyuquot around 1:35pm after Addy Power replaces blown fuse at POI. It is understood a **10T fuse** is installed. **(~26hr outage**)

Power goes out to Kyuquot without notice around 3:30 pm (Power had been on for under 2hrs).

Addy Power sends an email to Addy Power, cc'ing TEBurns, Synex, TSBC, and KCFN, stating:

1. *"Just trying to get power back on asap and checking all options to **why load changed**."*
2. *"As before Friday usually had very little issues with the power staying on. And we do know the fuses have been close to the limit for awhile. My concern is **if the fuse size goes up** and there is something not quite right could cause more issues."*

Thursday, March 12, 2020

Interfor resumes helicopter logging over KPL powerlines in morning.

Addy Power sends an email to Synex, cc'ing TEBurns and KCFN, stating, *"…we are concerned about something in the **Village of Kyuquot power system** changing since Friday March 6 **causing overloads** on the Hydro system…"*

TEBurns sends an email to BC Hydro, cc'ing Addy Power, Synex, and KCFN, stating, *"**A 15T fuse will not hold that line** when you add all **the loads outside the village**. In order to realistically avoid overload tripping I would recommend a 40T at the BCHydro-KPL POI and 25T fuses at all other protection points…"*

TEBurns provides a sealed letter to KCFN giving assurance that there are no faults on the KCFN HV system causing overall KPL system overloading.

TEBurns sends an email to BC Hydro stating:

1. "*If BCHydro is unable to upgrade the BC Hydro fuse at the BCHydro-KPL POI to at least 25T reliable power restoration to the village will be impossible*."
2. ***"Anything smaller than a 25T will not hold this load."***
3. *"The situation is getting rather desperate…"*

KCFN is informed Synex is in possession of an **October 2019** report from an electrical engineering firm that states a **minimum 25T** fuse should be installed at the POI to support the load demand at that time. KCFN informs BCUC, BC Hydro, and TSBC of the existence of this report by email.

Friday, March 13, 2020

Interfor continues helicopter logging over KPL powerlines.

Power is restored to Kyuquot around 9am after Addy Power replaces blown fuse at POI. Size of fuse installed unknown, however, assumed to be 15T. **(~40hr outage, out for 66hr out of the past 68hr**)

Power goes out to Kyuquot without notice around 6:15 pm. (Power had been on for 9hrs 15mins).

Power remains on in Ocluje.

Addy Power sends an email to KCFN, cc'ing TEBurns, Synex, BCUC, TSBC, and WorksafeBC, asking if they can, *"…look over the KFN portion of the line if allowed and see if we can isolate any portion of the line that maybe causing issues."*

KCFN CAO sends an email to Addy Power, cc'ing Synex, BCUC, WorksafeBC, TSBC, RCMP, and TEBurns stating:

1. *"Addy Power is not authorized to inspect or work on the powerline under KCFN jurisdiction."*
2. *"The operating permit for KCFN powerline is under High Tide Energy."*
3. *"Until Synex provides the technical data Tom Burns has requested there is not much more that we can do at this time."*
4. *"**KCFN's line has NOT been the issue with these power outages** as stated and sealed by Tom Burns, PEng."*
5. ***"We have contacted the RCMP and requested an active investigation regarding the changing out of the fuses."***
6. *"The quickest way to resolve this issue is to have Synex provide a powerline engineer to review these powerline issues with our engineer [Tom Burns]."*

Saturday, March 14, 2020

Interfor continues helicopter logging over KPL powerlines.

Power goes out to Ocluje around 1:15pm.

KCFN CAO provides notice by email of intent to issue a state of emergency over issues with supply of reliable power from KPL. Email is sent to TSBC, with BCUC, WorkSafeBC, Synex, Addy Power, and RCMP cc'd. This email includes a request for TSBC to send an inspector out to look at all sections of the KPL/KCFN powerlines due to ongoing safety concerns.

KCFN does not receive a response from TSBC to this request.

Synex proposes to retain TEBurns to handle technical matters related to the KPL line. TEBurns would also handle technical matters related to the KCFN powerlines. This includes engagement with BC Hydro. KCFN and TEBurns support this proposal and a joint contract is signed between all parties.

Sunday, March 15, 2020

Interfor continues helicopter logging over KPL powerlines.

KCFN issues a state of emergency due to ongoing power outages – issued late morning.

Addy Power sends an email to TEBurns, cc'ing Synex and BCUC, stating:

1. *"…the **original fuse** that **was** in the system that **15T** was fed from Zeballos and **held all the load** including cold load pickup since the inception of that power[line] **until the issue on March6th /20** we have been doing storm repairs for a # of years on that line*."
2. *"The 15T also held the small load in the Village of Oclage so as you explained to me you have not added load so **fuse size will not be the issue**. If the fuse does not stay on we will talk to technical safety and our engineer as what we feel is causing the issue."*
3. *"…**we will not be re-energizing again** until further investigation is complete."*

TEBurns sends an email to Addy Power, cc'ing KCFN, Synex, and BCUC stating:

1. *"It's hard to imagine that a 15T was able to hold 33 A (based on last month's peak reading) but will take your word for it."*

TEBurns sends an email to Addy Power, cc'ing Synex, BCUC, and KCFN stating, *"**The fuse at the BCH-KPL POI should be 40T**…".* TEBurns also requested monthly demand readings from Synex for the past couple of years in order to better understand any load growth that has occurred on the KPL system

KCFN crews find a section of KPL powerline down between Fair Harbour and Ocluje in afternoon.

VIP Powerlines mobilizes from Campbell River and repairs the downed powerline late in evening.

BCUC issues Order G-50-20 to Synex (KPL).

Monday, March 16, 2020

Interfor continues helicopter logging over KPL powerlines.

Power is restored to Kyuquot around 3pm after Addy Power replaces blown fuse at POI. It is understood a **25T fuse** is installed. **(~44hr outage**)

At this time **power had been out to Kyuquot for roughly 141hrs out of the previous 233hrs** (9:24pm Monday March 7th to 3:00pm Monday March 16th).

VIP Powerlines barge out of Houpsitas with planned work program incomplete. VIP cited **safety concerns around operational procedures with KPL's powerlines** as the primary reason they were unable to complete work program on KCFN powerlines.

Tuesday, March 17, 2020

Interfor continues helicopter logging over KPL powerlines.

TEBurns sends an email to Synex, cc'ing BCUC, Addy Power, and KCFN, stating:

1. *"**If the weather turns colder the village load will be much larger**"*
2. *"The most recent demand reading I have for the whole KPL network is from last month – 475 kVA which would represent 33 A on the 14.4 kV single phase line. **I am not confident the 25T fuse will hold that load.**"*

Friday, March 20, 2020

Interfor continues helicopter logging over KPL powerlines.

Power goes out to Kyuquot without notice around 1:45 pm. Power outage due to a branch falling from helicopter logging operations and contacting the line. KCFN notifies BCUC of this event by email, cc'ing TEBurns, BC Hydro, TSBC, and WorkSafeBC.

Helicopter logging continued without pause until the end of the day.

Power is restored to Kyuquot around 8:15pm after VIP Powerlines replaces blown fuse at POI. It is understood a **30T fuse** is installed. **(~6.5hr outage**)

Saturday, March 28, 2020

Interfor stops helicopter logging operations over KPL powerlines citing COVID-19 concerns and market influence as the primary reasons.

Monday, March 30, 2020

TEBurns submits a high-level KPL powerline system stabilization plan report to Synex as required by BCUC Order G-50-20.

This report includes the following statements:

1. The system protection scheme and protective device coordination require a detailed review.
2. The load on the system from both the village [of Houpsitas] and other direct KPL customers has been increasing steadily for several years.

3. Following a power outage….BC Hydro re-fused the cut-out on the BC Hydro side of BCH-KPL POI with a 10T fuse. **This fuse was far too small to carry the load at the time…Subsequent attempts to re-fuse at higher fuse values would last for longer periods of time but never more than 12 to 15 hours.**
4. An accurate assessment of load growth would require further study.
5. There are numerous places along the line where vegetation is able to touch the primary conductor. As a result, any time there is wind, even mild wind the line will experience multiple vegetation contacts. If these do not cause the fuse to blow directly, they will contribute to a constant weakening of the fuse element which can lead to failure under even minor overload conditions.
6. The other cause for concern with vegetation being this close to the line is that **we are about to enter the rapid growing cycle in the coastal rain forest**. **Within the next few months, the vegetation growth will be such that maintaining stable operation of the line will be very difficult**.
7. …helicopter logging where the logs are flown over the energized line greatly increase the risk of outages.
8. Until further improvements can be made to the system **all customers must be made aware that no load increases can be managed by this KPL system.** The newly installed electrical boiler in the [SD84] school should remain off until further notice.
9. **Helicopter logging over energized lines [is] not an accepted practice in the utility industry.** These operations should be halted until…a proper protocol can be developed such that the line can be de-energized while logs are flown over the line.

Additional Background Note:

In **July 2019** a commercial customer of KPL wrote a lengthy email to Synex expressing general frustration with ongoing lengthy power outages. Included in this email were the following statements:

1. "**The fuse at Ucluje** where the line goes from BC Hydro to Kyuquot Power Limited **keeps being tripped**. **It looks like the capacity of the line has been reached by the good citizens of Kyuquot.**"
2. The Kyuquot Checleset First Nations (KCFN) has been ambitiously adding buildings to its infrastructure both here and in Kyuquot [Fair Harbour].
3. Many residents have switched from wood to electric heat and from propane hot water and cooktops to electric ones.
4. **There has been a trend** of the various podges and businesses (mine included) **to add power hungry electric infrastructure** such as industrial sized deep freezers and deep fat fryers.
5. **The [SD84] school is just starting a major refit which includes additional electrical boilers and baseboard heaters.**
6. **Don't your engineers need to evaluate future projects and existing demands so that the fuses don't trip?** Is there a way to upgrade the system to meet demand?

The president of Synex sent a response to this email that included this statement: **"…our capacity is currently less then 50%, on the lines…"**

Attachments:

1. January 7, 2020 email from TEBurns giving notice of planned switch install.
2. January 7, 2020 email from Synex to HB Energy re: switch.
3. January 9, 2020 email from Synex to TEBurns re: switch concerns.
4. January 9, 2020 letter from KCFN to Synex providing reasoning for installation of isolation switch.
5. January 9, 2020 email from Synex to KCFN re: letter.
6. January 10, 2020 email from KCFN CAO to Synex re: switching.
7. January 10, 2020 email from KCFN issuing state of emergency to enable urgent work on powerlines.
8. January 10, 2020 KCFN Notification of Localized State of Emergency letter
9. January 12, 2020 email from KCFN lifting state of emergency and giving notice to Synex and HB Energy that the operating permit over KCFN powerlines is now held by HighTide Energy, not HB Energy.
10. January 14, 2020 email from KCFN requesting HB Energy remove all personal belongings and equipment being stored in a KCFN sea-can located in Houpsitas.
11. February 6, 2020 email from TEBurns notifying Synex of filed report to TSBC re: KPL powerline.
12. February 6, 2020 hazard report filed with TSBC by TEBurns.
13. February 13, 2020 email from KCFN to BCUC notifying of filed repot to TSBC re: KPL powerline.
14. February 14, 2020 email from BCUC to Synex requesting notification be given prior to de-energizing KPL line to complete work identified in incident report.
15. March 5, 2020 letter from BCUC to KPL containing questions regarding KCFN complaint.
16. March 8, 2020 email from KCFN CAO to Interfor Operations Manager re: helicopter logging.
17. March 10, 2020 email from TEBurns to BC Hydro.
18. March 10, 2020 emails between Addy Power, and Synex re: power outage.
19. March 10, 2020 email from TEBurns re: fuse size concerns.
20. March 10, 2020 email from TEBurns to Synex re: power outage.
21. March 11, 2020 email from Interfor Operations Manager notifying of plan to resume heli-logging operations over energized KPL powerline.
22. March 11-12, 2020 emails from Addy Power re: fuse sizes.
23. March 11, 2020 email from KCFN to BCUC complaining about how KPL is being operated.
24. March 12, 2020 letter from TEBurns regarding health of KCFN HV network.
25. March 13, 2020 email from TEBurns to Addy Power recommending troubleshooting procedures.
26. March 13, 2020 email from KCFN CAO to Addy Power explaining powerline jurisdiction.
27. March 14, 2020 email from KCFN CAO giving notice of intent to issue a state of emergency over issues with supply of reliable power from KPL.
28. March 15, 2020 KCFN State of Emergency letter
29. March 15, 2020 emails between TEBurns and Addy Power.
30. March 15, 2020 BCUC Order G-50-20 issued to KPL (Synex).
31. March 17, 2020 email from TEBurns to BC Hydro.
32. March 17, 2020 email from TEBurns to Synex regarding long-term suitability of 25T fuse.
33. March 20, 2020 email from KCFN to BCUC re: heli-logging operations causing power outage.
34. March 20-21, 2020 emails from KCFN to BCUC re: re-energization of power to Kyuquot.
35. March 28-29, 2020 emails from Interfor re: suspension of heli-logging.
36. March 30, 2020 report from TEBurns on KPL powerline system with KCFN comments added.
37. July 27, 2019 email complaint from commercial customer about KPL operations to Synex.

#1. January 7, 2020 email from TEBurns notifying Synex of planned switch install

Fwd: Proposed New Isolation Switch on KCFN Powerline

Tom Burns [redacted] Tue, Jan 7, 2:28 PM

to Maritza, Winston, Daniel, Cynthia, me

Here is the note I sent to Glenn last week for comment.

Sorry about the confusion.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

---------- Forwarded message ---------
From: **Tom Burns** [redacted]
Date: Sat, Jan 4, 2020 at 2:45 PM
Subject: Proposed New Isolation Switch on KCFN Powerline
To: <gmcdonnell@synex.com>
Cc: Cynthia Blackstone [redacted], Sam Rogers [redacted]

Hi Glenn, my name is Tom Burns and I have been retained by KCFN to provide engineering services for the upgrades to their HV Network.

One of the challenges we have had is providing isolation in order to safely work on the network. The nearest isolation point is the single phase GOLB & Cutout at Chamiss Bay, approximately 13 km from the village. This causes obvious delays and longer than necessary outages.

We are planning on installing a new isolation switch on existing KCFN structure P010 just outside the village. Please refer to TEB 92-19 Sectionalizing Switch Installation 04Jan2020 IFR drawing (attached).

This installation will substantially improve the operability and safety of the HV Network. Planned or emergency isolation will be much faster. KCFN will cover the costs of installing this switch.

Please provide comments at your earliest convenience.

We have line crews scheduled for work in the village next and plan on installing this new sectionalizing switch early in the program to facilitate the maintenance work.

Thanks.

Please call if you have questions.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

#2. January 7, 2020 email from Synex to HB re: switch

Re: Site Instruction #3 - Sectionalizer Installation

Daniel Russell [redacted] Tue, Jan 7, 2:10 PM

to Tom, Cynthia, me, HB, Josh, Jed, Jordie, Winston, Maritza

Hello Cory,

Hope all is well.

As the engineer of Record on Kyuquot Power Ltd.

Can you please review and comment on this.

Thanks

Hello Tom,

Glenn retired in August 2019, in his place Winston Wong and Martiza [redacted] will be the day to day contacts.

Regards

Daniel J. Russell MBA

President

Daniel.Russell@Synex.com

Synex International Inc
www.Synex.com
524 Locust Street, Burlington, ON, L7S 1V2
[redacted]

#3. January 9, 2020 email from Synex to TEBurns re: switch concerns

Re: Site Instruction #3 - Sectionalizer Installation

Daniel Russell [redacted] Thu, Jan 9, 1:16 PM

to Tom, Cynthia, me, Josh, Jed, Jordie, Daniel, Tanya, HB

Hi Tom,

I had a long conversation with our Electrical Engineer of Record for Kyuquot Power Ltd's.

Your proposed switch (above attachment) would control and shutdown 100% of our utility, which would give your client 100% control of our utility.

I have no issue with having a switch at this location, but it would have to be under our Electrician of Record's care and control and 100% of his costs and 100% of the lost revenue from this shutdown must be paid by Houpsitas at time of occurance.

This is required because of Electrician of Record is 100% responsible and asking him to agree to something that is outside of his care and control; is just not a fair or reasonable request.

Secondly, we are a publicly traded company and these assets are owned for the net benefit of all the shareholders of Synex International Inc; and I cannot reasonably ask them to give up control of an asset for something that would not provide them with any net benefit not to mention the costs.

Given the Houpsitas interest in having a more robust electricity system; would they be interested in buying Kyuquot's Kyuquot Grid Connection and Utility?

Synex International has invested over $4,000,000 to date in this utility, and I would have to get an independent valuation done; but I am sure I can get approval to sell it for $1,500,000 if this interests Houpsitas; then the band can do whatever they want, within reason; and not have the fiduciary duty, I have .

I trust this compromise and opportunity to buy the utility meets with your clients satisfaction.

If this work is to be done, I will also be requesting the work is done by our Electrician of Record, since he is responsible for it and it's management.

Sincerely,

Daniel J. Russell MBA

President
Daniel.Russell@Synex.com
Synex International Inc
www.Synex.com
524 Locust Street, Burlington, ON, L7S 1V2
[redacted]

#4. January 9, 2020 letter from KCFN to Synex providing reasoning for installation of isloation switch.

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations

January 9, 2020

Daniel Russell
Kyuquot Power Ltd.
Synex International Inc.
524 Locust Street,
Burlington, ON, L7S 1V2

Re: Installation of a GOAB Switch in Houpsitas Village

Dear Mr. Russell:

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN) has previously made you aware that there are a number of life-safety issues with the existing powerline. Issues that have been largely ignored by Kyuquot Power Ltd.'s (KPL) "Electrician of Record" in the past and we are committed to ensuring are addressed immediately.

With the way the lines through Houpsitas are configured (inadequate clearance between high-voltage and secondary), in order for KCFN to be able to safely fix the accumulating issues within our community KPL's high voltage line needs to be de-energized. It has been strongly recommended to us that we install an isolation switch in close proximity to our community to better enable this – and to improve long-term public safety. This switch will be located on KCFN Treaty Settlement Land. Due to the way KPL connected the powerline to Houpsitas, and how KPL supplies electricity to Walters Island and surrounding areas, this switch will have the ability to affect these locations. It is important to keep in mind that KPL's powerline currently runs through KCFN land. Without any agreement in place – which is how things currently rest – KCFN has jurisdiction. KCFN will ensure only qualified personnel operate the switch and it will only be turned off to allow for work to take place on our powerlines or in the case of an emergency. Notification will be provided to KPL in advance of any planned shutdown.

We are requesting that KPL direct HB Energy Ltd. to turn off power from Chamiss Bay so that we can have the switch installed. The installation is planned for January 11, 2020, between 09:00 and 15:00.

You have requested that the Electrician of Record (HB Energy Ltd.) install the switch. As mentioned to you previously, KCFN has hired a properly qualified powerline company to complete the necessary work on our behalf, so this is not required. This work is also being overseen by Mr. Tom Burns, P.Eng. In addition, we have a FSR-A Electrician overseeing the work currently taking place on residential services within our community. This entire team has committed to working with KCFN long-term.

Please confirm receipt and compliance with this request.

Cynthia Blackstone,
Chief Administrative Officer

General Delivery, Kyuquot, BC V0P 1J0
[redacted]

#5 - January 9, 2020 email from Synex re: letter

Re: Site Instruction #3 - Sectionalizer Installation

Daniel Russell [redacted] Thu, Jan 9, 6:13 PM

to Cynthia, Tom, me, Tanya, Richard, Kevin, Matthew, Lillian, Michael, [redacted], [redacted], [redacted], Frank

Cynthia,

I read your letter.

We have agreed to your switch.

If Tom or your Nation shows us the appropriate insurance(I will immediately have this reviewed by our insurance company) and wants to indemnify our company from any issue today or in the future arising from this installation, sure you can use your people.

I will not agree to giving up control of our grid to any one customer, I do not believe I can legally; our Engineer of Record needs to control this switch...and their needs to be a cost borne by a customer that wants this switch turned off.

If you want control of this Grid, I 100% understand; it has a fixed value which can easily be arrived at, and Synex would be happy to sell it to your nation.

I trust this meets your satisfaction and I will await Tom's insurance and indemnification.

I would welcome a call with you, if you give me a time and number; I will call you; I really want to have harmony between us; and letters/emails can give a bad tone to a positive intention.

Sincerely

Daniel J. Russell MBA

President
Daniel.Russell@Synex.com
Synex International Inc
www.Synex.com
524 Locust Street, Burlington, ON, L7S 1V2
[redacted]

#6. January 10, 2020 email from KCFN CAO to Synex re: switching

From: Cynthia Blackstone
Date: Friday, January 10, 2020 at 11:06 AM
To: Daniel Russell
Cc: Tom Burns, Sam Rogers, Tanya Deangelis, Richard [redacted], Kevin [redacted], Matthew [redacted], Lillian J[redacted], Michael Pilato, [redacted], [redacted]", [redacted], Frank [redacted]
Subject: Re: Site Instruction #3 - Sectionalizer Installation

Mr. Russell,

I am not sure you are fully grasping the situation here. KPL has no agreement with KCFN to have their high-voltage line run through our land in order to feed Walters Island and Surrounding Area. By rights KCFN can simply disconnect this line where it enters our land. This would then enable us to address the life-safety issues that exist within our community as we see fit. Obviously, this is not our preferred approach and we really hope it does not have to come to this.

KCFN urgently needs to address some serious transformer overloading issues where significantly oversized fuses have been installed at some point in the past as well as replace numerous leaking insulators. With the imminent sub-zero cold front approaching us, there is very real concern of house fires occurring. We are barging in a bucket truck and materials today and intend on having Coast Powerlines proceed with the required work

We require the KPL high voltage line in Chamiss be disconnected in order to do this. A GOAB switch will be installed as planned. KPL has no jurisdiction on Treaty Settlement Land, so we will be doing what is in our best interests.

The lineman for Coast Powerlines working on our system is Jordie [redacted]. He is a Red Seal PSSP Level 5 lineman that is qualified to work on BC Hydro systems. I understand Tom Burns asked Cory [redacted] from HB Energy if Jordie [redacted] would be able to operate the switch in Chamiss in order to facilitate our work program. I have been informed that Cory told Tom this would not be permitted.

A few questions for you:
1. Please confirm who KPL's Engineer of Record is you keep referring to.

2. Please confirm the FSR certification level Cory [redacted] currently holds.

3. Please confirm that should HB Energy not be able to make it to Chamiss to de-energies the line, that Jordie [redacted] is authorized to do so.

Once the immediate and critical life-safety issues we are currently working on addressing have been dealt with KCFN would be happy to entertain discussions with KPL on how best to move forward. Options include:

1. KPL's utility customers on Walters Island and Surrounding Area are fed via KCFN's utility network. This requires an operating procedure be agreed to that is suitable to all parties. This is our preferred approach, however, we do expect upgrades to the high-voltage "fly-over" line will be required, so it meets applicable safety regulations.

2. KPL re-route their utility that feeds Walters Island and Surrounding area around KCFN lands.

#6. January 10, 2020 email from KCFN CAO to Synex re: switching

3. KPL/KCFN undertake inspections of the entire utility (including underwater sections) to confirm compliance with applicable standards prior to KCFN taking over operations of the utility. This process would take some time and logistics surrounding operations would have to be worked out with the BC Utilities Commission.

We are hopeful that we will be able to come to agreement on terms in the near future, however, our immediate focus is the safety of our residents.

Regards,

Cynthia Blackstone
Chief Administrative Officer
Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations
[redacted]

#7. January 10, 2020 email from KCFN CAO issuing state of emergency to enable urgent work on powerlines.

Re: Site Instruction #3 - Sectionalizer Installation

Cynthia Blackstone [redacted] Fri, Jan 10, 4:00 PM

to Daniel, Tom, me, Tanya, Richard, Kevin, Matthew, Lillian, Michael, [redacted], [redacted], Frank, HB, Winston, Maritza, Nancy, Francis, Samantha, Bill, Janice, Marty, Lawrence, Andrew, Marcus, Dianna, Eleanor, Steinar, Jenniffer, KCFN, Deane, Paige.Hill, Laura.McLeod, Paul.Zabkar, Frank, Rick

To All Concerned,

Please be advised that the KCFN is issuing a short-term localized state of emergency to better enable urgent work on our power system to take place. Power will be out in Houpsitas, on the SD84 property, and on Walters Island & Surrounding Area between 9 am and 3 pm on Saturday January 11th and Sunday January 12th. Details can be found on the attached notification.

The local temperatures are forecasted to begin falling on Saturday, so locals are advised to please take all necessary precautions.

As has been outlined in the preceding email chain, knowledge of operational issues on the powerlines within Houpsitas is not a new thing. The potential life-safety concerns surrounding these issues is fairly new knowledge to us though.

I have attached three recent documents from Mr. Tom Burns, P.Eng. that identify corrective action to address safety issues. I am also including a video shot over the Christmas Holidays by a local resident. This video shows the bottom of an overloaded transformer glowing at night. Sparks from an insulator can also be seen. These should serve to highlight the seriousness of what we are working to address.

Mr. Russell - a copy of Coast Powerlines' Technical Safety work permit is attached. Coast has requested a declaration upon completion. As authorised, Coast will be using the isolation switch in Chamiss Bay to turn power off as required to facilitate the outlined work program.

Technical Safety BC - KCFN is requesting that a representative visit our community soon after this work is completed to both inspect what was done and review the system in its entirety. KCFN previously requested such an inspection early in 2019, however, the inspector that came never notified myself or any KCFN Managers/Directors. It is my understanding that he conducted the inspection with HB Energy. Since we were not given notice. nobody from our powerline team (engineers or contractors) was able to take part. Copies of the reports from this visit are attached. I am not aware of any follow-up inspection yet taking place.

Cynthia Blackstone
Chief Administrative Officer
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations
General Delivery, Kyuquot, BC V0P 1J0
[redacted]

#8. January 10, 2020 KCFN Notification of Localized State of Emergency letter.

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations

NOTIFICATION OF
LOCALIZED STATE OF EMERGENCY IN HOUPSITAS, BC
POWER OUTAGE

WHEN:	**9 am to 3 pm January 11th & 12th, 2020 (Saturday and Sunday)**
WHERE:	**Village of Houpsitas, SD84 Property, Walters Island & Surrounding Area**

The Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN) are declaring a localised state of emergency to allow for urgent work on the power system to take place.

The majority of homes and buildings within Houpsitas Village are currently being serviced by undersized transformers. There are also a number of insulators that are no longer working properly and in need of replacement. The majority of work taking place over this two-day period will consist of transformer upgrades, insulator replacements, and reconfiguration of residential services connections to better distribute usage loading.

While planning for this work has been taking place for some time, the forecasted sub-zero cold weather over the next couple of weeks has added a level of urgency, so work will now be taking place on short notice. Cold weather typically results in increased electrical usage due to heating needs – and subjects the transformers to increased loading. With transformers already being undersized, this additional loading would increase the chance of house fires and transformer failures.

Power is scheduled to be shutdown between 9am and 3pm on both Saturday January 11th and Sunday January 12th. The backup community generator will not be running at this time.

Power is expected to be fully restored by 3pm on Sunday January 12th. This localized state of emergency will be lifted at that time.

Kyuquot Power Ltd. has been notified of this work taking place.

Per,

Kevin Jules
Legislative Vice Chief

Cynthia Blackstone
Chief Administrative Officer

General Delivery, Kyuquot, BC V0P 1J0
[redacted]

#9. January 12, 2020 email from KCFN CAO lifting state of emergency and notifying Synex and HB Energy that the operating permit for KCFN's powerlines is now held by HighTide Energy, not HB Energy.

Re: Site Instruction #3 - Sectionalizer Installation

Cynthia Blackstone [redacted] Sun, Jan 12, 3:14 PM

to Daniel, Tom, me, Tanya, Richard, Kevin, Matthew, Lillian, Michael, [redacted], [redacted], [redacted], Frank, HB, Winston, Maritza, Nancy, Francis, Samantha, Bill, Janice, Marty, Lawrence, Andrew, Marcus, Dianna, Eleanor, Steinar, Jenniffer, KCFN, Deane, Paige.Hill, Laura.McLeod, Paul.Zabkar, Frank, Rick, [redacted], airharv, agower, media, jshepherd, jordie

To All Concerned,

This powerline work has now been completed and electricity has been fully restored to all affected areas. This short-term localized state of emergency has now been lifted.

During the course of this work taking place a number of new fairly serious life-safety issues were identified within Houpsitas. Our powerline team is currently working on plans to correct them and Tom Burns, P.Eng. will be providing the necessary direction soon.

As planned, a GOAB isolation switch has been installed on KCFN land in close proximity to Houpsitas Village. A photo of this work taking place is attached.

KCFN has agreed to terms for Mr. Joshua Sheppard, FSR-A from HighTide Energy to become the designated FSR for our powerlines. Our operating permit through Technical Safety BC will be held by HighTIde Energy moving forward. Over the last month, Joshua has also been overseeing extensive electrical work within our community to correct a long list of life-safety issues on residential and community building services. These life-safety issues have been documented, and reports will be available for public release should this ever be required.

Synex International - in order to best manage our power system, KCFN is interested in developing a joint operating order that would give mutual control of S3 and would ensure that the switch is only operated in a controlled manner by qualified people. Our one condition is that HB Energy no longer hold the operating permit on your line that supplies our community. The reason for this should be fairly evident based on what has been disclosed while working through this issue.

Technical Safety BC - we have been informed that Coast Powerlines made numerous attempts to contact your local inspector for our area over the last two months and left multiple messages. Coast wanted to discuss the work we were planning and obtain guidance on how best to go about obtaining proper permitting. To date, Coast has yet to receive a response. To us, this is unacceptable.

KCFN considers it extremely unfortunate that this issue has had to escalate to this level in order to be properly addressed. We are hopeful all involved that share responsibility for past failures will now be able to work with us in a more cooperative manner as we move forward.

Mr. Tom Burns, P.Eng. has been retained to be our powerline engineer. We have authorized Mr. Burns to represent our interests on all technical matters related to our powerlines. We would also be happy to cover Mr. Burns consulting fees should Synex wish to have him review the sections of powerline they hold jurisdiction over.

#9. January 12, 2020 email from KCFN CAO lifting state of emergency and notifying Synex and HB Energy that the operating permit for KCFN's powerlines is now held by HighTide Energy, not HB Energy.

Mr. Sam Rogers, P.Eng. has been retained on a contract basis to act as an Asset Management Advisor to KCFN. Mr. Rogers has been authorized to work closely with Mr. Burns on developing the path forward.

From KCFN's perspective, we are looking forward to the future as we continue on our journey towards true self-government. Below is an excerpt from Technical Safety BC's website in relation to jurisdiction:

"Technical Safety BC administers the Safety Standards Act and the Railway Safety Act which apply throughout British Columbia. This means that any regulated work on First Nations land, whether by Indigenous or non-Indigenous contractors, will require all necessary permits, licenses and certifications.

The Safety Standards Act and Railway Safety Act may not apply on First Nations land in certain situations depending on the terms of a treaty or conflicting federal legislation.

Technical Safety BC recognizes that we cannot promote equitable access to safety for all communities across BC without first developing and increasing our internal capacity for meaningful and respectful relationships with Indigenous communities and Nations. We continue to develop respectful engagement principles and increase the cultural competency of our employees through dialogue with Indigenous communities throughout the province.

In recognition of the rights of Indigenous people in Canada, including the right to self-determination, we hope that this approach will open the door for innovative models of safety oversight created by and in partnership with Indigenous communities."

I am travelling and in meetings out of Houpsitas most of this coming week, however, am confident in the capabilities of the team we have built. Please continue to discuss technical matters with them. I will still be available to address jurisdiction questions and review/sign any required documentation.

Chuu,

Cynthia

#10. January 14, 2020 email from KCFN CAO to HB Energy requesting they remove belongings from Houpsitas

Fwd: Site Instruction #3 - Sectionalizer Installation

Cynthia Blackstone [redacted] Tue, Jan 14, 8:41 AM

to HB, Tom, me, Chris, Marcus, Andrew, Timothy

Mr. Costello,

I understand HB Energy may have some personal tools and equipment stored in one of our sea cans in Houpsitas.

As HB Energy will no longer be holding the operating permit for our powerline, or doing any work on behalf of the Nations, can you please have it removed at your earliest convenience.

Please notify us when either you or another representative wishes to come retrieve it and I will arrange for an RCMP escort.

Alternatively, please send us a list of the possessions you wish returned and we will have them shipped to your company's address in Gold RIver.

Thanks,

Cynthia Blackstone

Chief Administrative Officer

#11. February 6, 2020 email from TEBurns notifying Synex of filed report to TSBC re: KPL powerline

KPL Line between Houpsitas and Chamiss Bay

Tom Burns [redacted] Thu, Feb 6, 10:53 AM

to Daniel, Paige, Josh, Jed, Cynthia, me

Good morning Daniel.

The KCFN retained me to review the section of the KPL line between the village of Houpsitas and Chamiss Bay in hopes that I could make some suggestions to help improve the safety and reliability of this portion of your powerline.

As you know this power line is critical to day to day life of the people in the village as well as your other customers on Walter Island. It has been reported to me that the powerline has a history of being inherently unreliable, experiencing long outages during difficult weather conditions. My experience since I have been working with the Nation is that this assessment is correct. I am aware of the difficulty of operating a power line in the rugged coastal environment however, I believe there are a number of routine maintenance activities and some structure upgrades that could significantly improve the performance of the line. I will have a report will be available in the next couple of weeks and will respectfully share this with you as soon as it is available.

The line was patrolled on Feb 4th by [redacted] Josh Shepherd, and myself. Sam Rogers was along as a representation of the KCFN.

During this inspection we encountered five serious issues that require immediate reporting to you as the asset owner even before I issue my formal report. EGBC guidelines require that I also formally report these to TSBC.

These items are listed below (Pole numbers given are the numbers mounted on the poles, the red numbers in brackets are from KPL drawings 4006 120-130):

1. Damaged neutral conductor near pole 430 (524): the neutral conductor has been significantly damaged at mid-span such that it appears that the only portion of the neutral conductor remaining is the steel core. This presents a serious safety risk to the downstream customers in the event of loss of the neutral conductor. In fact, as the conductor stands now it will be creating a high resistance neutral return path.
2. Seriously damaged angle pin on pole 434 (528): the angle pin on the pole has been so severely damaged that the primary conductor is dangerously close (less than 5 cm) to metal pin.
3. Broken pin insulator near pole 419 (513): The pin insulator has been broken either by impact or electrical fault. Only approximately 1/2 of the pin insulator remains intact allowing the primary conductor within centimeters of steel pin bracket. Failure of the remaining portion of the pin is immanent.
4. Damaged neutral spool on pole 421 (515): the neutral clevis has been damaged such that the neutral conductor is contacting the steel clevis hardware. This will lead to imminent failure of the neutral conductor.

#11. February 6, 2020 email from TEBurns notifying Synex of filed report to TSBC re: KPL powerline

5. Single Phase Primary GOLB Switch at Chamis Bay (no number on pole (403)) has no lock and the locking mechanism on the switch handle is broken. In its current state the switch could be operated by anyone.

Please feel free to call me if you have questions. I can supply pictures of these issues if required.

Tom Burns P.Eng. - Principal

TEBurns Engineering Ltd.

[redacted]

[redacted]

#12. February 6, 2020 hazard report filed with TSBC by TEBurns.

Report an Incident or Hazard

Thank you for submitting your report.

The information you provided will be reviewed by Technical Safety BC. Please note that Technical Safety BC only responds to reports that are relevant to Technical Safety BC oversight. Completed investigation reports are available at www.technicalsafetybc.ca/safety-information/incident-data.

Submission Receipt

Submitted	**06 Feb 2020 08:52:28 PM**

Incident / Hazard

Type of Report	**Hazard: A source of potential harm to persons or potential damage to property. Hazards can include unsafe work practices, unsafe conditions, unlicensed work or unpermitted work.**
Category	**Unsafe Condition - Equipment or site is left in a condition that could cause damage, injury or death**
Date (When was the hazard observed?)	**4 Feb 2020**
Address/Location of Incident or Hazard	
Street Number	**several locations indicated below**
Street Name	**Chamiss Bay Rd**
City	**Kyuquot**
Province	**British Columbia**
Postal Code	**V0P1J0**

#12. February 6, 2020 hazard report filed with TSBC by TEBurns.

Description	**At the request of the KCFN the line between the village of Houpsitas and Chamiss bay was reviewed with the intention of finding improvements that would increase the reliability of the power supply to the village. During this inspection five serious issues were encountered that require immediate reporting to TSBC. These items are listed below (Pole numbers given are the numbers mounted on the poles, the red numbers in brackets are from KPL drawings 4006 120-130): 1) Damaged neutral conductor near pole 430 (524): the neutral conductor has been significantly damaged at mid-span such that it appears that the only portion of the neutral conductor remaining is the steel core. This presents a serious safety risk to the downstream customers in the event of loss of the neutral conductor. In fact, as the conductor stands now it will be creating a high resistance neutral return path. 2) Seriously damaged angle pin on pole 434 (528): the angle pin on the pole has been so severely damaged that the primary conductor is dangerously close (less than 5 cm) to metal pin. 3) Broken pin insulator near pole 419 (513): The pin insulator has been broken either by impact or electrical fault. Only approximately 1/2 of the pin insulator remains intact allowing the primary conductor within centimeters of steel pin bracket. Failure of the remaining portion of the pin is immanent. 4) Damaged neutral spool on pole 421 (515): the neutral clevis has been damaged such that the neutral conductor is contacting the steel clevis hardware. This will lead to imminent failure of the neutral conductor. 5) Single Phase Primary GOLB Switch at Chamis Bay (no number on pole (403)) has no lock and the locking mechanism on the switch handle is broken. In its current state the switch could be operated by anyone. Please feel free to call me if you have questions. I can supply pictures of these issues if required.**

Injury

Damage

Type of Equipment Involved

Type of Equipment	**Electrical equipment and systems**

Unit

Unit Number	**Several Locations**

Contact Information

Primary Contact

Name	**Tom Burns, P.Eng.**
Email	[redacted]
Phone Number	[redacted]

Attachment(s)

Attach Photos or Documents	**None**

#13. February 13, 2020 email from KCFN to BCUC notifying of filed report to TSBC re: KPL powerline

Fwd: Critical Safety Items on the Houpsitas to Chamiss

Sam Rogers [redacted] Thu, Feb 13, 8:12 PM

to Ashita.AnandSanghera, amanda.duncan, christine.schwab, ian.homer, kristine.bienert, Cynthia, Jed, Josh, Chris, Lillian, Jordie, [redacted], [redacted], [redacted], Laura.McLeod, Paul.Zabkar, Chris, media, commission.secretary, Paige, Tom

Hi All at BCUC,

My apologies for the group email, however, we were not sure who to reach out to, so are hoping one of you can point us in the right direction.

Can you please review this email chain and the attachments.

Over the last year we have been trying to get TSBC involved to provide assistance/guidance in regards to existing safety issues on the powerline owned and operated by Kyuquot Power Ltd. (KPL). Besides the immediate safety issues outlined in Tom Burns' email, and filed online incident report, there are a number of larger issues surrounding construction, operation, and ongoing maintenance. Some of these issues are identified in the attached report from a powerline company that was hired to review the line as part of an assessment done by the Maa-nulth Treaty Society last year.

It now appears that TSBC does not actually have jurisdiction over this line (see attached BCUC Exemption Notice No. D-EL 2017-01). I wish this was something we had been informed of earlier.

Obviously, there is some growing frustration on KCFN's part about how hard it has been to get any action on this matter despite repeatedly reporting safety concerns to parties thought to be responsible for ensuring that safe electrical infrastructure exists in BC. The information forming the basis for these concerns has come from qualified professionals. The publicly traded company responsible for the operation of this line was provided the March 11, 2019 report, and has been made aware all subsequent safety related concerns.

We would appreciate if somebody from BCUC would provide some guidance on how now KCFN goes about having these issues addressed. KCFN has retained Mr. Tom Burns, PEng. as our powerline engineer. Mr. Burns is available to discuss technical matters as required.

Thanks,

Sam Rogers, P.Eng.

Asset Management Advisor • Manager of Capital Projects
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

#14. February 14, 2020 email from BCUC requesting KPL provide notice prior to deenergizing powerlines

Complaint - KCFN_Kyuquot Power Ltd

Nand, Keshni [redacted] Feb 14, 2020, 2:06 PM

to Daniel.Russell@synex.com, BCUC, Cynthia, me, Tom

Good afternoon,

The BC Utilities Commission (BCUC) is in receipt of the attached correspondence from the Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN) regarding safety concerns related to a Kyuquot Power Ltd (KPL) power line. BCUC staff request KPL to review the correspondence and respond to the KCGN and the BCUC by Friday, February 21, 2020.

Further, as outlined in its Electric Tariff, should KPL find that there is a need to de-energize the line, residents (including ones on outer islands within Strathcona Regional District) should be notified prior to work commencing on the line.

Kind regards,

Keshni Nand

Analyst, Compliance and MRS

British Columbia Utilities Commission
P: 604.660.4700 **BC Toll Free:** 1.800.663.1385 **F:** 604.660.2700
bcuc.com

bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

Kyuquot Power Ltd.
Complaint filed by Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

STAFF INFORMATION REQUEST NO. 1 TO KYUQUOT POWER LTD.

1.0 Reference: Complaint filed by Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN)
KCFN email to the BCUC dated February 14, 2020

In its complaint, KCFN identified the following safety concerns:

- Damaged neutral conductor near pole 430 (524): the neutral conductor has been significantly damaged at mid-span such that it appears that the only portion of the neutral conductor remaining is the steel core. This presents a serious safety risk to the downstream customers in the event of loss of the neutral conductor. In fact, as the conductor stands now it will be creating a high resistance neutral return path.
- Seriously damaged angle pin on pole 434 (528): the angle pin on the pole has been so severely damaged that the primary conductor is dangerously close (less than 5 cm) to metal pin.
- Broken pin insulator near pole 419 (513): The pin insulator has been broken either by impact or electrical fault. Only approximately 1/2 of the pin insulator remains intact allowing the primary conductor within centimeters of steel pin bracket. Failure of the remaining portion of the pin is immanent.
- Damaged neutral spool on pole 421 (515): the neutral clevis has been damaged such that the neutral conductor is contacting the steel clevis hardware. This will lead to imminent failure of the neutral conductor.
- Single Phase Primary GOLB Switch at Chamis Bay (no number on pole (403) has no lock and the locking mechanism on the switch handle is broken. In its current state the switch could be operated by anyone.

On February 21, 2020, Kyuquot Power Ltd. (KPL) provided the British Columbia Utilities Commission (BCUC) with a report from Addy Power Ltd. summarizing work completed on February 17, 2020 on KPL's power line.

1.1 For each safety concern listed above, please describe the details of the repairs that took place.

1.2 For each safety concern listed above, please identify when these devices were last assessed as part of KPL's maintenance program, prior to February 2020.

1.3 Addy Power Ltd.'s February 17, 2020 report lists Technical Safety BC (TSBC) Permit #3338337 and Inspection #ELOP-1711912-2020. Please provide a copy of this TSBC permit and inspection report.

1.4 Please identify if KPL considers there to be any remaining safety hazards at the locations specified above, or anywhere else on KPL's power line.

1.4.1 For those identified, please explain why they have not yet been addressed and KPL's action plan to address these issues, including timeframes.

1.4.2 Please explain how KPL is mitigating any remaining safety hazards in the intervening period.

2.0 Reference: KPL Maintenance Program
Report from TE Burns Engineering, dated November 8, 2019

In the report from TE Burns Engineering, dated November 8, 2019, pages 2-3 detailed issues with fluctuating voltages that KCFN has experienced:

> Based on descriptions of power quality problems the community is experiencing, lights going from bright to dim and appliance motors burning out, it would appear the [sic] there are issues with fluctuating voltage.
>
> Fluctuating voltage is caused when the connection between system neutral and ground is poor or non-existent. Fluctuating voltage can also be caused if there is poor or non-existent system neutral to ground connections in a building.

2.1 Please confirm whether KPL is aware of any issues with power quality, including fluctuating voltage, on its distribution system.

2.2 Please explain whether KPL performs any power quality monitoring on its distribution line.

2.2.1 If yes, please provide a summary of the results of all power quality monitoring over the past 12 months. Please also provide map(s) showing the location(s) of all power quality monitoring device(s).

2.3 Please describe in detail KPL's maintenance program. Please include in the response:

i. Maintenance activities performed on each category of distribution device (i.e.: poles, wires, transformers, sectionalizing devices etc.)

ii. Maintenance intervals.

iii. Report from most recently completed maintenance assessment.

In the report from TE Burns Engineering, dated November 8, 2019, page 5 details a clearance issue on the KPL Line.

> We examined one site on the KPL line, the numbers on the poles were 452 (545 on the KPL drawing – 45' Class 3) and 453 (546 on the KPL drawings – 40' Class 3). The span between the poles had a sever clearance issue over a rock knoll where the neutral conductor appeared to be within 0.5 meters of the ground. These poles should be changed to 55' Class 3 poles.

2.4 Please confirm whether KPL has verified the clearance issue at the location stated in the preamble above.

2.4.1 Please confirm whether KPL has resolved the clearance issue. If not, please describe KPL's action plan to address this issue, including timeframes.

3.0 Reference: KPL Complaints Process
Mr. Daniel Russell email to the BCUC dated February 14, 2020

In his email, Mr. Russell stated he received an email regarding this complaint on December 4, 2019.

3.1 Please provide a copy of any and all complaints or complaint-related correspondence received from KCFN or any other customer of KPL in the last 12 months.

3.2 Please explain whether the complaint was addressed at that time. If not, please explain why.

3.3 Please explain KPL's complaint process when a complaint is received from a customer.

3.4 What are the timelines for responses to complaints, and to safety concerns?

3.5 What are the methods customers can use to contact KPL, including for urgent safety matters? Please provide any and all methods including phone numbers, email, websites, etc.

3.5.1 Please confirm there is a contact person available 24/7 to respond.

3.6 Please provide the job title of the person responsible for complaints received by KPL.

#16. March 8, 2020 email from KCFN CAO to Interfor Operations Manager re: helicopter logging

Fwd: Planned Heli Logging

Cynthia Blackstone [redacted] Sun, Mar 8, 9:35 PM

to Bill, josh.hiebert, Gene, me, Frank, [redacted], Francis, Lillian, Samantha, Nancy, Janice, Matthew, Kevin, Richard, Bill

Hello Mr. Schulte,

What kind of operation is Interfor running here?!

Please take the time to read the series of emails below.

KCFN has had little information about the Heli logging in the area and NO notification of the schedule.

Addy Power isn't on site to address issues arising from your operation.

We have been unable to locate a representative from Interfor in charge of this operation.

There are very real safety concerns here!

And on top of it all, it is our understanding that the helipads constructed are on KCFN Treaty Settlement Lands!

KCFN is very concerned about Interfor's operation in our area.

We expect the heli logging operation to cease until proper procedures are followed and our concerns addressed.

Cynthia Blackstone
Chief Administrative Officer
Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations
[redacted]

#17. March 10, 2020 email from TEBurns to BC Hydro

On Tue, Mar 10, 2020 at 12:33 PM Tom Burns [redacted] wrote:

Hi Bill - thanks so much for taking my call. As we discussed the village in Kyuquot has been experiencing outages lately that have no obvious fault. This is a new development and no new load has been added in the village so something has changed upstream on the KPL line or the BC Hydro POI.

BC Hydro [redacted] shows a 10T BC Hydro fuse at the point of demarcation with the KPL line. We recently measured the load in the village under normal conditions at 260 kW (18 amp @ 14.4 kV) which you can see on the attached fuse coordination diagram is just under the minimum melt of a 10T fuse. This, with the additional loads of Walters Island, the school and Fair Harbour we can probably expect loading of around 400 kW (28 A @ 14,4 kV) when it gets cold. This is why the power will come on for a while and then trip as additional load pushes into the trip zone of the fuse.

We will require a minimum of a 25T fuse in order to hold the load; a 40T would be better but that may cause problems with you upstream coordination.

I suspect that the POI fusing has historically been higher than a 10T link and following the outage that occured last week it was refused with the 10T as indicated [redacted].

Please escalate this issue as time is of the essence. The village has a diesel standby but limited fuel. Also not all the load is on the diesel, including the school, which is closed when the power is out.

Please call me if you need further information.

Also if you could update me on the process that would be much appreciated.

Thanks

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]
[redacted]

#18. March 10, 2020 emails between Addy Power and Synex re: power outage

From: Maritza [redacted]
Date: March 10, 2020 at 12:57:48 PM PDT
To: Ian Addy
Cc: Cynthia Blackstone, Daniel Russell, Josh Hiebert
Subject: RE: Added load details

Hi Ian,

Power outage again in Kyuquot today at 11:00 am. A customer said it was caused by VIP.

Nope, we were not informed about anything other than "we are working on the Band's powerline" and not affecting KPL line. This is the third power outage in a row., Friday, Sunday and Tuesday. No authorization requested for any work.

Interfor asked our authorization for their ongoing work. They are not the ones to be blamed. They know the process of what they are doing

Ian, could you please re-energized again and if you could look into it, please. Tomorrow morning should be ok.

Thank so much,

Maritza [redacted]

Administrative Assistant
[redacted]

Synex International Inc.
www.synex.com
[redacted]

From: Ian Addy [redacted]
Sent: 10-Mar-20 12:36 PM
To: Maritza [redacted]
Cc: Daniel Russell [redacted]
Subject: Added load details

Just wondering if Synex/kyuquot Power was given any information on the work being done in the Village of Kyuquot with regards to service upgrades to the Village system? As with conversations yesterday on site in Kyuquot they mentioned you did receive info thanks

Ian Addy

#19. March 10, 2020 email from TEBurns re: fuse size concerns

Re: Power in Chamiss-Kyuquot

Tom Burns [redacted] Tue, Mar 10, 1:36 PM

to me, Cynthia, Keshni.Nand, Jordie, Ryan, Josh, Maritza

I have done a substantial amount of research this morning into this issue.

There have been a number of seemingly load related trips on the KPL line over the last several days. This is a new development.

There has been no load added in the KPL village under my direction as the Engineer of Record. The team's work has been bringing existing infrastructure up to CEC to meet existing load and safety requirements.

Based on reading from the generator last week the village load under normal operating conditions is about 260 kW, which I assume has been constant for some time. This translates to about 18 A @ 14.4 kV. If you add the additional load of Walters Island, the school and Fair Harbor I expect the total load will be about 400 kW or 28 A @ 14.4 kV.

I suspect something has changed on upstream of the village on the KPL line or beyond the BC Hydro Point Of Interconnection (POI) with KPL. Looking at BC Hydro information the BC Hydro fuse at the KPL-BCH POI the last BC Hydro fuse is shown as a 10T. As you can see from the attached fuse coordination diagram that size of fuse will just barely hold at 18 A but definitely not at 28 A.

I suspect, although I have no supporting information, that this fuse may have historically been heavier than a 10T but not recorded in the BC Hydro database. Following the outage last week the fuse may have been replaced by the crew as per the BC Hydro database (at the 10T level) which would explain this new behavior of the network. This is speculation only.

I have reached out to one of my BC Hydro contacts in the Campbell River office to investigate the situation.

Maritza, I have included you on this email to keep KPL in the loop. The request for fusing at the BC Hydro-KPL POI should come from KPL. My suggestion would be minimum a 25T fuse and preferably a 40T.

Please call if anyone has any questions.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]
[redacted]

#20. March 10, 2020 email from TEBurns to Synex re: power outage

Re: Added load details

Tom Burns [redacted] Tue, Mar 10, 3:28 PM

to Maritza, Keshni, me, Cynthia, ianaddypower, Josh, Daniel, Paige

Hi Maritza - there seems to be a lot of misinformation on what is happening in the village and on their HV network.

For clarification so everyone has the same information:

- VIP did not cause the outage in the village this morning - to the best of my knowledge they were not working on the HV Network directly - they were installing ground mats.
    - there was one outage last week caused by the snow and a faulty lightning arrester in the village all the outer outages you mentioned were due to causes beyond the village network.
- The ongoing work I am overseeing as the Engineer of Record for the Nation does not involve any load additions in the village. We have been working to bring the homes and commercial spaces up to CEC (which in some instances involved changing from a 100A panel to a 200 A panel - no load additions), replacing already heavily overloaded HV transformers, replacing end of life hardware on the HV network, replacing or adding HV switches to enhance the safety and operability of the HV network, and enhancing network grounding that was in very poor condition.
- Given that the village is a separate HV Network I do not believe we would need to seek authorization from KPL to maintain or operate our network.
- From readings taken from the generator last week it was determined that the village load is approximately 260 kVA, I suspect this is the loading that has been present for some time. KPL reads the the village primary meter monthly so if there have been load increases you would have seen it in the readings.

As I am typing this email VIP, at the request of Cynthia, VIP is patrolling the line between the village and Chamiss Bay in the hopes of expediting power restoration. We will inform you have the results of the patrol when it is complete.

As per my previous notes I believe the out today is the result of inadequate fuse sizing somewhere between Fair Harbor and the BC Hydro Point Of Interconnection, possibly the fusing at the BC Hydro POI.

It would be helpful moving forward is if I could have an engineering contact at Synex that I could deal with directly on technical inter-utility issues. This would provide opportunities to jointly coordinate the operations of the KPL and the KCFN HV Networks.

Please call me if you would like to discuss any of these items further.

Thank you.

#20. March 10, 2020 email from TEBurns to Synex re: power outage

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

#21. March 11, 2020 email from Interfor Operations Manager notifying of plan to resume heli-logging operations over energized KPL powerlines

RE: Re: Planned Heli Logging

Bill Schulte [redacted] Wed, Mar 11, 4:06 PM

to Cynthia, Gene, Tifany, Frank, Ronald, me, Josh

Hi everyone,

We have had several conversations with WorkSafe officer Jesse Stromquist today as follow up to his inspection in Chamiss yesterday. He has informed us verbally that he has no concerns with Interfor heli-logging over the powerlines. I also understand the kyuquot power outages had nothing to do with Interfor's operations, as referenced in the attached email. Given we expect to be complete in block CHM245H later today (only heli block that does not have flight path over the powerlines) we intend to resume heli-logging in the other blocks again tomorrow morning. Feel free to contact Josh Hiebert or myself directly if you have any questions or concerns and I look forward to our conference call tomorrow at 1pm.

Regards,

Bill Schulte
Operations Manager
Interfor Coastal Woodlands
[redacted]

#22. March 11-12, 2020 emails from Addy Power re: fuse sizes

Fuse

Ian Addy [redacted] Wed, Mar 11, 1:05 PM

to Tom, Mark, Maritza, Cynthia, Dan.Kelly, Addy, me, Paige, BCUC

Fyi we are about to re-energize the powerline to Kyuquot, B.C.Hydro has not been able to increase the fuse size to prevent overload power outage the fuse size is still at this time a 10t fuse, may have same issues in the next few days until such time fuse size and coordination is rectified.

Ian Addy

Re: Fuse

Ian Addy [redacted] Wed, Mar 11, 7:16 PM

to Mark, Tom, Maritza, Cynthia, Dan.Kelly, Addy, me

On my way back from Fair Harbour today I got to thinking about the issue's in Kyuquot since Friday March 6 my understanding is there was a outage due to snow and lightning arrestor lead contacting an object since that day we have been unable to keep the power on due to load I am just wondering if anything else was done in the village that day to add or change any equipment i:e switch at reclousure, if so could you please check if things were put back to normal I understand things are a little different system in the Village with regards to the generator back up system. Just trying to get power back on asap and checking all options to why the load changed.

As before Friday usually had very little issues with the power staying on. And we do know the fuses have been close to the limit for awhile. My concern is if the fuse size goes up and there is something not quite right could cause more issues.

That being said the only area we have not patrolled line is Walter's Island. As we have done the other sections 3 times now.

Any added info or thoughts on this matter would be appreciated thanks

Ian Addy
Addy Power Ltd

#22. March 11-12, 2020 emails from Addy Power re: fuse sizes

Power restoration

Ian Addy [redacted] Thu, Mar 12, 7:57 AM

to Daniel, Maritza, Mark, Tom, [redacted]

Good morning Daniel and Maritza

Just to follow up on my concerns regarding power restorations to Kyuquot and Walters Island after Talking with my brother on this matter we are a little concerned about something in the Village on the Kyuquot power system changing since Friday March 6 causing overloads on the Hydro system(we are doing our best to get temporary fuse increase as per my last email) at this time Addy Power will not be re-energizing the line to Kyuquot unless a letter from KCF powerline representative being an Engineer can confirm all is good in the Village for re-energizing.

My apologies for conerns that this may cause.

Thanks

Ian Addy

Addy Power Ltd

#23. March 11, 2020 email from KCFN to BCUC complaining about how KPL is being operated

Fwd: Fuse

Sam Rogers [redacted] Wed, Mar 11, 8:29 PM

to Keshni, Sarah, Kristine, Tom, Cynthia, Ryan, Jordie, Jesse, Branko, Paige, Pekka.Viitasaari, [redacted], [redacted], media, commission.secretary, Josh

Hi Keshni,

This is now the third time in the last year discussions around this Kyuquot Power Ltd. (KPL) regulated powerline utility have escalated to including MLA's on the cc list.

MLA's - this is not taken lightly, and we appreciate your time.

Please review this email chain and the attached email chain.

I think this issue has gone long enough and all the silliness going on around this KPL line needs to end. People's lives are being endangered and I do not feel this community's needs are being taken seriously. Temperatures are cold, fuel is running low, and there is yet to be a regulatory body step forward that seems to have any means of addressing what is taking place.

KCFN has a powerline engineer (Tom Burns, P.Eng.) in place authorized to act on the Nations' behalf. Tom is extremely qualified and had a long career with BC Hydro prior to starting up his own firm. KCFN also has an FSR-A ticketed electrician holding the operating permit for the powerlines on Treaty Settlement Land (TSL). This permit was issued through Technical Safety BC.

From what I am seeing, there are a number of people who seemily represent KPL that do not appear to have the required credentials to be providing the comments that they are making. This is leading to a significant amount of mis-information gaining traction. This is both dangerous and counter-productive.

There have been multiple requests made for Synex (KPL) to make a qualified powerline engineer available to discuss the ongoing operational issues with Tom Burns. To date, Synex has yet to even acknowledge this request, let alone provide an engineer. I am seriously beginning to suspect that they do not have one on staff, or under contract as a consultant. This is extremely concerning to me, as I do not understand how a regulated powerline utility is allowed to operate without this capability readily available.

I am also seeing that companies like Interfor are relying on assurance from representatives from companies like HB Energy Ltd. for their safety procedures around helicopter logging OVER high voltage powerlines. Flying logs (especially with branches still attached) over energized high-voltage powerlines is quite obviously risky. This does not necessarily mean it can't be done, just that properly qualified individuals should be making the judgement calls around it taking place. HB Energy Ltd. has no P.Eng.'s or Utility Arborists on staff that I am aware of. I would be very interested in knowing who's professional opinion is being relied on by HB Energy to make the decisions in regards to high voltage lines they appear to be making.

I do not understand how this powerline is being allowed to continue to be operated in this manner. At the very least, the people and companies who seem to be representing them should be properly qualified to be making the statements/claims they are making.

#23. March 11, 2020 email from KCFN to BCUC complaining about how KPL is being operated

We have had a crew from VIP Powerlines working in Houpsitas for KCFN under the operating permit held by HighTide Energy. These lines do not fall under the jurisdiction of KPL (Synex). This is a well qualified crew that often works on the BCHydro system. This crew has reported serious concerns to me about the lack of clear operating procedures for this section of KPL line. I fully agree with these concerns. Despite systematically isolating themselves from the KPL line prior to working on the KCFN line, this crew is now reluctant to continue work within Houpsitas under all this is cleared up and normal power is restored. KCFN supports this decision.

Based on the events over the last year, it is still not clear to me which regulatory body has any ability to do anything about the failure of KPL to provide reliable power to their end users.

Hopefully this regulatory body comes forward soon. People's lives, educations, and livelihoods are at stake here.

Regards,

Sam Rogers, P.Eng.

Asset Management Advisor • Manager of Capital Projects
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

#24. March 12, 2020 letter from TEBurns regarding health of KCFN HV network.

[redacted]

TE Burns Engineering

PROFESSIONAL PROVINCE OF T. E. BURNS BRITISH COLUMBIA ENGINEER
12 March 2020

March 12, 2020

Attention: Cynthia Blackstone, CAO, Sam Rogers, P. Eng.

Re: Village of Houpsitas Network Asset Review for Increasing KPL Fuse Sizing

An inspection of recent work completed on S1 (Recloser By-Pass GOLB Switch) was conducted this morning by Vancouver Island Powerlines to ensure there were no issues that could cause problems should a higher rated fuse be installed at the BCHydro-KPL POI.

The inspection indicated no problems with the switch installation.

The Village of Houpsitas has been running on their standby generator since 15:30 yesterday with no issues. To the best of my knowledge there are no electrical faults on the Village HV Network at this time. The Village HV Network Health is such that an increase in fuse sizing at the BCHydro-KPL POI will not adversely affect its operation.

I have no information, and make no statements or claims, regarding the integrity of the network on Walters Island, the islands fed by KPL beyond Walters Island, the KPL "fly-over" circuit that runs through the village, the section of the KPL network that feeds the SD84Sschool, or any of the remaining KPL network from the KCFN-KPL POI back to the BCHydro-KPL POI.

The electrical load in the village at this time is approximately 335 kVA or 23 Amps @ 14.4kV.

Sincerely,

Tom Burns, P.Eng.
Principal, TE Burns Engineering Ltd

[redacted]

#25. March 13, 2020 email from TEBurns to Addy Power recommending troubleshooting procedures

Re: Fuse Sizing and Future work

Tom Burns [redacted] Fri, Mar 13, 9:27 PM

to Ian, Cynthia, Mark, Maritza, me, JOSHUA, Jordie, [redacted] Ryan, Keshni, Paige, Daniel, BCUC, jesse.stromquist, Branko, Lillian, Matthew, Nancy, Janice, Richard, Bill, Samantha, Francis, Jacqueline, Darryl

Thanks for the note Ian

A couple of thoughts:

- if we could get readings from BC Hydro for B phase of fedder TSV 2552 before and after we re-energize the line to Chamiss bay that would give us some very useful information. This will give us information about the load in this segment of the line. I think BC Hydro can provide this from assuming there is telemetry for that feeder at SCC - Darryl or Jacqueline is this possible?
- A line patrol from Chamiss Bay to the KCFN point of interconnection is a good idea as well although I doubt you will find any problems in this area since there has been no adverse weather.
- Once this is done I suggest closing in the switch at Chamiss Bay and see if you can get another current reading from BC Hydro. This will give us a good idea about the load on that segment of the line outside the village network.
- A walk through of the KCFN network not likely yield anything given that the network is currently energized by the generator and operating without problems. Base on the last set of readings I have from the Houpsitas generator the load is actually lower than what we measured in the morning. There does not seem to be a load issue in the village.
- One area that has not been thoroughly patrolled since this started is Walters Island or any of the small islands feed.

Please keep me in the loop as things develop.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]
[redacted]

#26. March 13, 2020 email from KCFN CAO to Addy Power explaining powerline jurisdiction

Cynthia Blackstone [redacted] Fri, Mar 13, 10:39 PM

to Ian, Tom, Mark, Maritza, me, JOSHUA, Jordie, [redacted], Ryan, Keshni, Paige, Daniel, BCUC, Jesse.Stromquist, Branko, Lillian, Matthew, Nancy, Janice, Richard, Bill, Samantha, Francis, Jacqueline, Darryl, Kristine, Andrew, Edward, Timothy

Hello Ian,

Addy Power is not authorized to inspect or work on the powerline under KCFN jurisdiction.

The operating permit for KCFN's powerline is under High Tide Energy. Only those working under High Tide Energy are authorized to inspect or work on KCFNs powerline.

Until Synex provides the technical data Tom Burns has requested there is not much more that we can do at this time. KCFN's line has NOT been the issue with these power outages as stated and sealed by Tom Burns, PEng.

We have contacted the RCMP and requested an active investigation regarding the changing out of the fuses.

The quickest way to resolve this issue is to have Synex provide a powerline engineer to review these powerline issues with our engineer.

Please do not enter KCFN territory.

Cynthia Blackstone
Chief Administrative Officer
Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations
[redacted]

#27. March 14, 2020 email from KCFN CAO giving notice of intent to issue a state of emergency over issues with supply of reliable power from KPL

Re: Site Instruction #3 - Sectionalizer Installation

Cynthia Blackstone [redacted] Sat, Mar 14, 10:15 AM

to Paige, Keshni, Kristine, Sarah, ian.homer, Tom, Branko, jesse.stromquist, BCUC, Daniel, Ryan, [redacted], Jordie, JOSHUA, me, Maritza, Mark, Ian, Andrew, Edward, Timothy

Hello Mr. Hill,

Due to what KCFN is currently enduring with supply of reliable power form Kyuquot Powerline Ltd., KCFN is now preparing to issue yet another local state of emergency.

We feel it is imperative that TSBC begin to take an active part in this ongoing issue, as we feel the current situation is extremely unsafe.

Can you please let me know the earliest time TSBC is able to have an inspector out to review ALL sections of this powerline. This INCLUDES the section of line under KCFN jurisdiction.

All - once TSBC confirms an inspection date, any party wishing to have representatives present will be welcome.

This is now the third time in the last year that KCFN has officially requested TSBC complete an inspection of this powerline.

Cynthia Blackstone
Chief Administrative Officer
Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations
[redacted]

#28. March 15, 2020 KCFN State of Emergency letter.

Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations

NOTIFICATION OF
LOCALIZED STATE OF EMERGENCY IN HOUPSITAS, BC
POWER OUTAGE
ISSUED: MARCH 15, 2020

WHEN: Ongoing until Kyuquot Power Ltd. is able to provide a reliable source of power

WHERE: Village of Houpsitas, SD84 Property, Walters Island & Surrounding Area

The Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN) are declaring a localised state of emergency due to ongoing reliability issues with the regulated Kyuquot Power Ltd. (KPL) Electrical Utility. KPL is owned and operated by Synex International Inc. (Synex).

Operations of KPL are regulated by the BC Utility Commission (BCUC). Responsibility for ensuring compliance with applicable construction standards is the responsibility of Technical Safety BC (TSBC). Responsibility for ensuring safe workplaces are able to be provided rest with WorksafeBC. BCUC, TSBC, and WorksafeBC have been kept informed of this evolving situation and KCFN have requested they engage in this process at their respective levels of responsibility.

KCFN have requested that the Royal Canadian Mounted Police (RCMP) open an investigation into the decision making process around the operation of the KPL Utility over the last year since Synex was provided reports showing extensive issues on the KPL powerline. KCFN is of the opinion there is reasonable cause to suspect the decisions made have led to this current situation. This current situation is causing economic loss to residents of Kyuquot, KCFN Government, and SD84 employees. Food is spoiling, and due to current cold weather, there are growing health concerns. There is also increased potential for physical harm coming to those that remain without power due to attempts by them to provide heat for themselves.

KCFN have a highly qualified powerline engineer that has been authorized to act as an agent of KCFN. On March 14th Synex requested KCFN's powerline engineer work jointly with both Synex and KCFN to help resolve this current power reliability situation. A contract has now been signed by both KCFN and Synex authorizing this to happen and this work is currently underway.

KCFN is eager to work with any and all regulatory bodies with mandates that include provisions for protection of public safety for Canadian citizens.

Per,

Kevin Jules, Legislative Vice Chief

Cynthia Blackstone, Chief Administrative Officer

General Delivery, Kyuquot, BC V0P 1J0

[redacted]

#29. March 15, 2020 emails between TEBurns and Addy Power

Re: Kyuquot Power outage

Tom Burns [redacted] Sun, Mar 15, 4:33 PM

to Ian, me, Cynthia, Daniel, Kristine, Mark, Addy, Maritza, Jordie

It's hard to imagine that a 15T was able to hold 33 A (based on last month's peak reading) but will take your word for it.

I think that a 25T is the largest fuse BC Hydro will allow us to install at this time so we can hope for the best. I would recommend a different strategy for sizing the fuses down the line.

Normally as you go out on a line you make the fuses smaller as you are suggesting. This is the conventional approach so that the fuse nearest the fault will go first and isolate the smallest number of customers.

Since almost all the customers on the KPL line are at the end of the line I would suggest leaving all the fuses down the line at 25T or even larger (40T). This way when there is a fault the 25T at the POI will always go. The strategy here is that this fuse is easy to get to.

If the fuse in Chamiss Bay goes then there is a substantial delay while you get there. Since the Nation has qualified staff in Kyuquot much of the time perhaps we could make arrangements between KPL and KCFN to have the Houpsitas to Chamis bay line patrolled by the Nation staff (as long as a qualified person is on site). This way Addy could do the patrol, Fair Harbor to POI and the Nation could patrol from Houpsitas to Chamiss Bay. This would save considerable time and Addy would not need to re-fuse on the Chamiss Bay side.

Can you please tell me where the cut out locations are on the KPL line?

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

On Sun, Mar 15, 2020 at 4:19 PM Ian Addy [redacted] wrote:

Hi Tom the last power outage was from the 25t is at the POI,where the 30t fuse is where the 15t was up till Friday when Hydro replaced this fuse, this is approximately 15km from The Kyuquot POI due to a wrong installation at time of construction there is only the one fuse at this point I was talking to Hydro management about this situation on Saturday and they were going to look into rectifying this asap so both POI and the customers fuse are in proper positions with Hydro one span away from switch and customer fuse will be on switch on load side of switch.

So once again the 15t actually held more load than the 25t that is in place now feeding Kyuquot and fuse is not going to be issue. And we will put in a 20t in tomorrow as close as possible to the Village before energizing.

Ian

#29. March 15, 2020 emails between TEBurns and Addy Power

On Sun, Mar 15, 2020, 10:22 Ian Addy, [redacted] wrote:

Good morning everyone

At this time my brother and I are going out this afternoon to start re-energizing the line towards Kyuquot from the B.C.Hydro POI we will try and get power on up to Chamis bay spend the night in Zeballas then first thing in the morning go towards the first nations territory and hopefully we are advised where this point is and put in a cutout fused lower than the POI, as per previous emails we are not allowed on there territory at this time so it is very important we know where this is situated. We will be working diligently to get power on to the Village and Walters Island asap.

As you may have noticed I have not included any first nations representatives on this email please do not forward.

Ian Addy
Addy Power Ltd

MSH since 1984

bcuc
British Columbia
Utilities Commission

Suite 410, 900 Howe Street
Vancouver, BC Canada V6Z 2N3
bcuc.com

P: 604.660.4700
TF: 1.800.663.1385
F: 604.660.1102

ORDER NUMBER
G-50-20

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

and

Kyuquot Power Ltd.
Complaint filed by S.R.

BEFORE:
D. Morton, Commissioner
C.A. Brewer, Commissioner
T. Loski, Commissioner

on March 15, 2020

ORDER

WHEREAS:

A. By email dated February 13, 2020, a Kyuquot Power Ltd. (KPL) customer representative (S.R.) filed a complaint with the British Columbia Utilities Commission (BCUC) concerning, amongst other things, a safety matter regarding KPL (Complaint);

B. The KPL power distribution system (KPL System) is interconnected to the British Columbia Hydro and Power Authority (BC Hydro) electric system and supplies customers, including the Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations (KCFN), the Village of Houpsitas and other customers on the outer coast of Kyuquot Sound, with electricity;

C. In the Complaint, S.R. stated that the KPL System has a history of unreliable service and several deferred maintenance items on the distribution line warranted a safety concern. The Complaint was brought forward to the BCUC and KCFN;

D. On February 14, 2020, the BCUC contacted KPL regarding the Complaint and subsequently requested KPL to provide a written response to the Complaint regarding the status of the safety matter;

E. On February 21, 2020, KPL responded, indicating that all but one deficient item had been corrected. KPL submitted that the single remaining deficient item would be corrected within 30 days as permitted by Technical Safety British Columbia;

F. On March 8, 10, 11, and 12, 2020, S.R. contacted the BCUC regarding ongoing power outages of the KPL System; and

G. The BCUC has reviewed the various correspondence and supporting material in relation to the Complaint and determines that further process is warranted.

NOW THEREFORE pursuant to section 83 of the *Utilities Commission Act*, the BCUC orders that KPL provide information as follows:

1. KPL is directed to provide the BCUC with a daily update via email on status of the KPL System, including its operational status, work performed on the KPL system that day and work planned for the following day. The first daily update will be made on March 16, 2020 and will continue for 15 days following the date of the first filing.

2. Within 7 days of issuance of this Order, KPL is directed to provide the BCUC a copy of up to date record drawings detailing the KPL System, including a scaled site plan, ownership of assets, land title, rights of ways, protective devices and points of interconnect.

3. Within 7 days of issuance of this Order, KPL is directed to provide the BCUC a copy of all outage logs of the KPL System for the past two months. Logs should include details of the time of outage, the time the KPL System was restored and the cause of the outage.

4. Within 7 days of issuance of this Order, KPL is directed to confirm that the required documentation and fees have been submitted to BC Hydro to initiate a Primary Service Alteration Application and to provide the BCUC with an update on the status of this application based on correspondence received from BC Hydro. KPL is directed to notify the BCUC when the Primary Service Alteration Application process with BC Hydro is complete and a new Electric Service Agreement is in place.

5. Within 7 days of issuance of this Order, KPL is directed to provide the BCUC with its KPL System stabilization plan (Plan). That document shall include:

    a. A high-level technical assessment of the current KPL system by a qualified professional engineer;

    b. Identified areas of risk to maintaining the KPL System in a stable, operational state for the next 3 months;

    c. Action items to address the risks identified in Directive 5(b);

    d. A proposed strategy to form a working group with impacted ratepayers, to develop a long-term plan to achieve stability of the KPL System; and

    e. A proposed time frame to complete a full safety and condition assessment report (Assessment Report) of the KPL System by a qualified professional engineer. That Assessment Report shall identify any safety hazards or maintenance concerns on all portions of KPL's distribution line, including submarine cables. It shall also include a recommended maintenance plan for future routine maintenance of the KPL System.

DATED at the City of Vancouver, in the Province of British Columbia, this 15th day of March 2020.

BY ORDER

Original signed by:

D. Morton
Commissioner

#31. March 17, 2020 email from TEBurns to BC Hydro

Kyuquot Power Situation

Tom Burns Mar 17, 2020, 11:41 AM

to Jacqueline, me, Daniel, Cynthia, Tanya

Good morning Jacqueline.

Please share this note internally as you require.

- I have been in Kyuquot since yesterday morning. KPL allowed me to direct switching on their line so that we were able to sectionalize the line, allow cold load pick up current to subside and move forward. We completed re-energization of the entire network, including the village at 15:00 yesterday. So far the 25T fuse is holding but I am not confident that this will continue if the weather turns. Yesterday the VIP crew re-fused the KPL fuse at the POI with a 25T and brought me the spent fuse link - the link had melted rather that exploding which indicates gradual overload.
- I have signed contracts with Kyuquot Power Ltd to #1 help get the power restored and #2 help them with their BCUC order. So far Synex has allowed me to direct operations on the line to assist in the resolution of this situation.
- Yesterday, at the time of re-connecting the village network to the KPL grid the load on the village generator was approximately 200 kVA - the weather was warm and sunny, so you can expect significantly more load if the weather is cold and rainy.
- The peak load at the BCHydro-KPL POI from last month's demand reading from the KPL bill is 475 kVA so on the singly phase POI that would be 33 A @ 14.4 kV - I don't think a 25T fuse will hold that load.
- There are issues on the KPL line that need to be resolved, one of which is the gradual load growth that has occurred over time on this system - I need to meet with BCHydro staff after this Covid-19 pandemic resolves to work through this.
- There are no practical load shedding strategy available at this time.
- In the meantime I would like to ask BC Hydro to allow KPL to increase the POI fuse size to 40T until this situation stabilizes. If we lose power in the village during the next few weeks it is going to be very difficult to restore. Many FN villages are shutting their borders to outsiders due to the Covdid-19 pantemic.

Communications in Kyuquot is difficult because of the remoteness of the village. I have access to wifi at times so will monitor my email.

I am supposed to be flying out at 14:00 so after about 16:00 I will be available on my cell.

Look forward to hearing from you and thanks for your help.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

#32. March 17, 2020 email from TEBurns to Synex re: long-term suitability of 25T fuse

Re: Kyuquot Power outage

Tom Burns Tue, Mar 17, 1:27 PM

to Tanya, Daniel, Jordie, Kristine, Cynthia, Ian, Josh, Maritza, me

Update March 17th, 2020 13:15 PST

- Power is still on.
- The village load that was connected yesterday at 15:00 was 200 kVA (correction from the 338 kVA I reported yesterday - I redid the load calcs when things settled down - sorry about the confusion.)
- If the weather turns colder the village load will be much larger
- The most recent demand reading I have for the whole KPL network is from last month - 475 kVA which would represent 33 A on the 14.4 kV single phase line. I am not confident the 25T fuse will hold that load.
- I have reached out to BC Hydro to see if we can find a temporary solution to this load situation until current events settle out and we can all work towards a permanent solution.

Tom Burns P.Eng. - Principal
TEBurns Engineering Ltd.
[redacted]

#33. March 20, 2020 email from KCFN to BCUC re: heli-logging operations causing power outage.

Re: Fuse

Sam Rogers [redacted] Fri, Mar 20, 4:42 PM

to Keshni, Sarah, Kristine, Tom, Cynthia, Ryan, Jordie, Jesse, Branko, Paige, Pekka.Viitasaari, [redacted], [redacted], media, commission.secretary, Josh

Hi Keshni,

As you are aware, there has been tremendous effort over the last week to work towards a solution to the ongoing KPL Utility reliability issues. Tom Burns, P.Eng. has been leading this and has managed to arrange authorization from BC Hydro for a short-term fuse size increase until a proper long-term solution can be arranged. This is good news.

The other issue KCFN is continuing to monitor is the ongoing heli-logging over the KPL powerline between Chamiss and Houpsitas. Earlier today I witnessed a branch fall from one of the loads and hit the powerline. While it did not break the line, it did cause the power to go out to Kyuquot. I happened to be waiting with the flagger along with a fuel delivery truck driver. I had not been taking videos, so do not have one of the actual branch falling, however, did manage to get a video of the powerline bouncing after being contacted. Here is a link to this video: https://www.dropbox.com/transfer/AAAAAN05lWwNFv3q1iBJ5ItfwFIwm6F0IqX-cHILgZ32VmbR3JWuYYQ

The worst of the bouncing had ended by the time I managed to get the video started.

After this incident I took a few more videos of logs being flown over the line. A link to these is included here: https://www.dropbox.com/transfer/AAAAAPWOE7QACOwuZD1OFVbpnTeBJviQN_fnEWxTuQVQNQPRMDoGoLE

As can be seen, there are branches on most of the logs.

It would seem KCFN has very little say over what is taking place in regards to this heli-logging as KCFN has been told by Interfor that, *"We have permission and have been working with Kyuquot Power (Synex) and HB Energy LTd."*

Synex (KPL) owns this line and HB Energy Ltd. holds the operating permit for it through TSBC.

Interfor has also previously informed KCFN that, "*Addy powers commitment was to fix power within 24hrs should there be an issue and this was confirmed with HB Energy Ltd who manages the line that this was acceptable.*"

More information on Interfor's response to KCFN's concerns over this heli-logging can be found in the attached email. This email was also attached to my previous email in this string.

I realize there is likely very little BCUC can do about this, however, I thought I would keep you informed.

Regards,

Sam Rogers, P.Eng.
Asset Management Advisor • Manager of Capital Projects
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

#34. March 20-21, 2020 emails from KCFN to BCUC re: re-energization of power to Kyuquot.

Re: Fuse

Sam Rogers [redacted] Sat, Mar 21, 9:01 AM

to Keshni, Sarah, Kristine, Tom, Cynthia, Ryan, Jordie, Jesse, Branko, Paige, Pekka.Viitasaari, [redacted], [redacted], media, commission.secretary, Josh

Correction from previous email:

"...*some are between the POI and Zeballos (KPL jurisdiction)*...." should have read, "...*some are between the POI and Fair Harbour (KPL jurisdiction)*..."

My apologies for any confusion.

Sam Rogers, P.Eng.

Asset Management Advisor • Manager of Capital Projects
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

On Fri, Mar 20, 2020 at 11:00 PM Sam Rogers [redacted] wrote:

Hi Keshni,

Earlier this evening, under the authorization of Tom Burns, qualified KCFN personal isolated the section of line between Chamiss Bay and Houpsitas. This enabled VIP Powerlines' crew to energize the line to Fair Harbour. Once heli-logging over the powerlines was finished for the day, qualified KCFN crew were able to patrol, give the all-clear, and energise the line between Chamiss and Houpsitas.

Utility power was restored to Kyuquot at 8:20pm.

VIP Powerlines was also able to install a larger fuse at the POI today. This was authorized by BC Hydro as a short-term measure to restore reliable power to Kyuquot until a long-term solution to the ongoing KPL Utility reliability issue can be established.

It is worth noting that a number of areas remain on this line where tree contact could still easily cause this larger fuse to blow and power be lost. Some of these locations are on the section of line between Zeballos and the POI (BC Hydro jurisdiction), some are between the POI and Zeballos (KPL jurisdiction), and some are on Walters Island (KPL jurisdiction). There are also still multiple neutral clearance and brushing concerns on the KPL line between Chamiss and Houpsitas (KPL jurisdiction).

As far as KCFN is aware, heli-logging over the section of powerline between Chamiss Bay and Houpsitas is expected to resume Saturday morning (March 21, 2020).

Regards,

Sam Rogers, P.Eng.

Asset Management Advisor • Manager of Capital Projects
Ka:yu:'k't'h' / Che:k'tles7et'h' First Nations

#35. March 28-29, 2020 emails from Interfor re: suspension of heli-logging

RE: Chamiss Operations

Bill Schulte Sun, Mar 29, 8:55 AM

to me, Andrew, Christian, David, Tom, Jeff, Cynthia, Jesse, Branko, [redacted], Frank, Len, Gene, Tifany, Francis, Kristine, Ian, FrontCounterBC@gov.bc.ca

Hi All,

I would like to clarify Josh's email below.

Interfor is not suspending our heli operations as a result of the complaints that have been made. The decision yesterday was based on ongoing challenges with weather, reduced crewing, equipment breakdowns, delayed fuel deliveries, log barge availability, equipment barge schedule, etc. Interfor did promptly and voluntarily shutdown for one day on March 9th in response to an email from KCFN relaying concerns which Interfor worked with the nation to address before resuming. We have fielded calls and had site visits from several different government authorities all of which have been very professional to deal with and none of which requested any pause or stoppage of our operations.

It's a culmination of all the delays and challenges that have made it prohibitively expensive and difficult to complete the last 2-3 days of heli logging on this project. Combine this with significant market uncertainty and the challenge to maintain a healthy worksite and healthy workers amidst the COVID19 pandemic and it has became apparent the prudent business decision was to leave the helicopter parked after it was grounded for fog for the second day in a row.

I look forward to using this downtime to work together to find solutions to repair whatever communication breakdown has occurred in order to move forward professionally and collaboratively when operating conditions in BC improve.

Stay safe and healthy and I wish you and your loved ones well through this global crisis. We are all in this together.

Bill

Sent from my Samsung Galaxy smartphone.

#35. March 28-29, 2020 emails from Interfor re: suspension of heli-logging

From: **Josh Hiebert** [redacted]
Date: Sat, Mar 28, 2020 at 2:07 PM
Subject: Chamiss Operations
To: Jeff [redacted], Cynthia Blackstone, Ronald [redacted], Frank [redacted], Francis [redacted]
Cc: Len Apedaile, Gene Hudema, Tifany Wyatt, Sam Rogers, Bill Schulte

Good Afternoon

Hopefully everyone is safe and healthy amidst this Covid crisis that we are all having to navigate.

We are writing to inform you that Interfor has ceased our heli operations in Chamiss Bay as of today.

This was a tough decision but after being delayed due to the unfounded Worksafe BC complaint made by KCFN earlier this month, the ongoing follow up with that, and now with a false complaint made by Sam Rogers of KCFN yesterday to the ministry of forests, it is not financially viable to keep our operations going while working through unfounded complaints. This past 6 months has been straining on resources as we work through answering obstructive emails by one representative but continue to work collaboratively through meetings and phone calls with KCFN and then having unfounded complaints made to other agencies by a representative of KCFN. Hopefully we can work through these challenging times we can continue to build and develop a long term relationship. As discussed on onsite meeting in the fall of 2019 in the community of Houpsitas it is good to work together as we are neighbors and neighbors can rely on each other in times of need, so if there is anything you need please do not hesitate to ask.

Stay safe and have a great weekend

Thanks

Josh Hiebert, RFT, ATC
Operations Engineer
Coastal Woodlands
[redacted]

Interfor
1250A Ironwood Street
Campbell River, BC V9W 6H5
[redacted]

#36. March 30, 2020 report from TEBurns on KPL powerline system with KCFN comments added.

KYUQUOT POWER LTD. SYSTEM STABILIZATION PLAN

This document contains a system overview and proposed plan for the stabilization of the KPL system in north eastern Vancouver Island, BC

TEBurns Engineering

30 March 2020

Kyuquot Power Ltd
System Stabilization Plan

Contents

Engineer's Seal

MISSING ENGINEER'S SEAL

Comments By: Sam Rogers, P.Eng.,
KCFN Asset Management Advisor
April 23, 2020

Scope of Engagement

The scope of the TEBurns Engineering engagement is twofold:

1. To work jointly with Kyuquot Power Ltd (KPL) and the Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations (KCFN) to restore power to the KPL system and thereby the village of Houpsitas and other KPL customers and
2. To assist KPL complete the reporting and actions specified in the BCUC Order G-50-20, specifically item #5

The details of this report are based on the information provided from the following sources:

- Kyuquot Power Ltd (Synex) including discussions with KPL staff.
- BC Hydro
- Personal observations of the powerline while working in the area.
- Discussion with Power Line Technicians who have worked on the line.

The information stated in the report are to the best of my knowledge

General Description of the Kyuquot Power Ltd. (KPL) System

Kyuquot Power Ltd is a regulated utility in the Province of BC and is a wholly owned subsidiary of Synex International Inc.

The KPL system consists of a single phase 14.4 kV distribution line with a Point of Interconnection (POI) with BC Hydro near Oclucje and a POI with the KCFN high

voltage system near the village of Houpsitas. The line carries on past the village to serve KPL customers on Walters Island and seven private islands.

The line also feeds the Fair Harbour marina (also owned by KCFN) immediately before it transitions to submarine cable.

The line consists of:

- Overhead Powerline Section 1: 21.12 km of single-phase over head line from the BCH-KPL POI to the submarine cable terminal pole in Fair Harbour.
- Submarine Cable through Fair Harbour: 4.45 km of single-phase submarine cable to the isthmus on Markale Peninsula. The isthmus is crossed with a single 24 m overhead span.
- Submarine Cable Crossing from Markale Point to Chamiss Bay: 8.47 km of single-phase submarine cable.
- Overhead Powerline Section 2: 11.26 km of single-phase overhead line from Chamiss Bay to the POI with the KCFN high voltage system.
- From this point the line shares structures with KCFN high voltage system for 1.94 km to a primary meter for the village and a transfer switching scheme.
- Once the KPL system enters the village it continues for 401 meters as a single-phase overhead line mounted on pole top extensions above the KCFN structures to the terminal pole for the submarine cable to Walters Island.
- Walters Island is fed by 255 m or submarine cable.
- Walters Island is traversed by 891 m of single-phase overhead line. This line serves approximately 26 customers.
- Another 2663 meters of single-phase submarine cable from Walters Island feeds 7 other small islands and approximately 14 additional accounts.

Information from Synex indicates that the overhead portions of the line consist of a #1/0 ACSR Al primary and #2 ACSR neutral conductors.

The submarine cable is #2 Cu with a 16x#12 Cu concentric neutral. *(See Attachment #1: Kyuquot Submarine Cable)*

The peak demand for the 2019/2020 winter season was 489 kW on January 12th, 2020. Table 1 below shows the energy and demand for the KPL system over twelve billing periods from June 15th, 2019 to February 12th, 2020.

Table 1: 2019/2020 Winter Energy & Peak Demand for the KPL System

Billing Cycle		Energy (kWhr)	Peak Demand (kW)
15-Jan-19	13-Feb-19	145,800	420
14-Feb-19	14-Mar-19	192,000	379
15-Mar-19	12-Apr-19	154,800	310
13-Apr-19	15-May-19	164,400	327
16-May-19	13-Jun-19	125,400	317
14-Jun-19	15-Jul-19	142,200	285
16-Jul-19	14-Aug-19	126,000	301
15-Aug-19	13-Sep-19	124,800	269
14-Sep-19	14-Oct-19	138,000	318
15-Oct-19	14-Nov-19	165,000	334
15-Nov-19	12-Dec-09	163,800	423
13-Dec-19	14-Jan-20	212,400	489
15-Jan-20	12-Feb-20	189,600	475
Average		**157,246**	**357**
Peak			**489**

Would be helpful to see demand by area (ie. SD84 property, Houpsitas, Walters Island, each Outer Island, Fair Harbour)

The system was designed and constructed by Sigma Engineering Ltd. Sigma Engineering Ltd is a wholly owned subsidiary of Synex International Inc.

The KPL system was commissioned in June 2006.

BCUC Order G-50-20 Item 5a: High Level Technical Assessment of the Current KPL System

The line traverses some of the most rugged and remote terrain in Canada. Operating and maintaining a powerline in such an environment is challenging.

The system appears to be generally well engineered and constructed. Systemic problems are discussed in this section.

Plans to deal with lower risk systemic problems can be dealt with through the full safety and condition assessment (BCUC G-50-20 5e) detailed below. Plans to deal with items that are an immediate risk to system stability for the next 3 months are discussed in sections BCUC G-50-20 5b & BCUC G-50-20 5c detailed below.

I am unclear as to the design strategy of using a primary conductor (1/0 ACSR) that is larger than the neutral conductor (#2 ACSR). Since this is a single-phase line all the current serving the load must return on neutral conductor so the performance of the line will be limited by the #2 ACSR neutral.

From visual inspection, of some of the structures, the poles appear to be in relatively good condition. More detailed inspections of the poles should be undertaken as part of the full safety and condition assessment (BCUC G-50-20 5e).

Agreed

The line is in need of a vegetation risk assessment by a qualified utility arborist followed by extensive brushing along the entire length of the line. A hazard tree assessment and removal program should be implemented in the future.

There are several spans along the line where the ground clearance needs to be increased to maintain safe limits of approach, particularly for vegetation management. In many of these locations' clearance could be improved by engineering and reconfiguring the existing structures without replacing poles. In some places taller poles may be required. *(See Attachment #2: Examples of Clearance & Vegetation Issues and Damage on KPL System)*

Agreed

There are several locations where there is damaged line hardware such as insulators, insulator brackets, neutral spools and some places where the neutral conductor has been dislodged from its spool. The line requires a detailed pole by pole inspection by qualified personnel to report all the locations where damage has occurred. This should be followed by a full maintenance cycle to repair deficiencies. *(See Attachment #2: Examples of Clearance & Vegetation Issues and Damage on KPL System)*

Agreed

The overhead line on Walters Island is in poor condition both in terms of pole line hardware and vegetation management. This should be reviewed by qualified personnel followed by a complete maintenance cycle.

Agreed

With regard to system protection there is little documentation available. I have not seen a single line diagram for the KPL system. The information regarding system protection points is as follow (some is from discussion with line crews wh system):

See attached photos showing this switch with no lock between March 15 to April 15, 2020.

- There is a Gang Operated Load Break Switch (GOLB) at the BCH-KPL POI. I have been told by line crews that this switch does not have a locking mechanism but have not verified this in person.
- There is a fused cutout on the customer side of the BCH-KPL POI currently fused to 30T
- I have been told by line crews that there is a recloser near the BCH-KPL POI but have no other information on the device
- I believe there is a cutout at the submarine cable terminal pole at Fair Harbour but have no information on the size of the fuse link installed.
- There is a cutout on the submarine cable terminal pole in Chamiss Bay but no information on the size of the fuse link installed
- There is a GOLB switch on the Chamiss Bay approximately two spans form the submarine cable terminal pole.
- There is a cutout one span from this GOLB switch, conversations with the line crew indicate that this has a 25T fuse link but this has not been verified.

An Operating Single Line Diagram should be created for the KPL system. Agreed

The system protection scheme and protective device coordination require a detailed review. Agreed It is unknown if any protective coordination studies have been done on the system. Because of the nature of the system (with predominantly all the load at the far end of the line) non-conventional device coordination may be beneficial. Because of the extreme remoteness of the location it would be desirable to have protective devices in locations where they can be accessed by qualified personnel easily or operated remotely.

Certain inexpensive solutions, such as automatically resetting utility fault indicators, could greatly assist patrolling line crews in locating faults on the system.

The system could benefit from technology modernization at the various POIs. Electronic reclosers with satellite internet links would improve the reliability of the system and provide telemetry to the system operators that would allow better decisions to be made in real time.

The load on the system from both the village and other direct KPL customers has been increasing steadily for several years. Agreed At this point the peak load on the line during the winter months exceeds the amount contracted in the BC Hydro Agreement (ESA). The BC Hydro ESA maximum demand for Over the past 12 months the peak demand has been recorded a indicated that they are unable to continue to feed this load with BCH-KPL POI. The extent of the BC Hydro required system upgrades has yet to be determined by BC Hydro.

Would be helpful to see demand growth by area (ie. SD84 property, Houpsitas, Walters Island, each Outer Island, Fair Harbour)

The actual pole numbers installed on the poles to not match the pole numbers in the KPL record drawings. This should be corrected so that specific locations on the system can be clearly identified. Agreed

See KPL Record Drawings (Item #1 of BCUC Order G-50-20)

BCUC Order G-50-20 Item 5b: Areas of Risk to Maintaining the KPL System in a Stable Operational State for the Next 3 Months

Electrical Load:

March 6, 2020.

The recent peak load for the KPL System over the last 12 January 12, 2020. The BC Hydro Electric Service Agree 350 kVA.

KCFN is interested in knowing who decided to do this and based on what information.

Following a power outage on ~~February 26th~~ BC Hydro re-fused the cut-out on the BC Hydro side of BCH-KPL POI with a 10T fuse. This fuse was far too small to carry the load at the time, particularly when accounting for the cold load pick up current following an extended outage in cold weather. The 10T fuse lasted for under 2 minutes before it melted on over-load.

KCFN is interested in knowing who decided to do this and based on what information.

Subsequent attempts to re-fuse at higher fuse values would last for longer periods of time but never more that 12 to 15 hours.

The situation has been temporarily resolved by BC Hydro making some changes on its distribution feeder to allow the KPL customer fuse to be increased to a 30T fuse link. BC Hydro has made it clear that this is a temporary measure only and does not indicate that KPL's ESA level of 350 kVA will be automatically increased.

Table 2 below shows the capability of the KPL system under the approved Normal (ESA) conditions and the Temporary Increase conditions:

Table 2: Normal vs Temporary Power Available

	Fuse Size	Rated Power	Max Continuous Power	Maximum 8 hr Emergency Power
Normal (ESA)	25T	360 kVA	518 kVA	590 kVA
Temporary	30T	432 kVA	605 kVA	705 kVA

Based on a review of the KPL electrical bills the electrical energy usage on the system is increasing. However, at this time the available data is only a very small sample of BC Hydro bills. An accurate assessment of load growth would require further study. Agreed

Would be helpful to see demand growth by area (ie. SD84 property, Houpsitas, Walters Island, each Outer Island, Fair Harbour)

Vegetation Contact:

There are numerous places along the line where vegetation is able to touch the primary conductor. As a result, any time there is wind, even mild wind the line will experience multiple vegetation contacts. If these do not cause the fuse to blow directly, they will contribute to a constant weakening of the fuse element which can lead to failure under even minor overload conditions. Agreed

This, coupled with the added loading to the line make for a very unstable system.

See Attachment #2 for samples of such locations.

The other cause for concern with vegetation being this close to the line is that we are about to enter the rapid growing cycle in the coastal rain forest. Within the next few months, the vegetation growth will be such that maintaining stable operation of the line will be very difficult. Agreed

General Condition of the Line and External Activities:

As mentioned in the high-level technical assessment, there are several locations along the line where line hardware is damaged. This leads to conditions where the line is essentially more fragile than a line with intact hardware.

External activities happening around the line such as logging and, in particular, helicopter logging where the logs are flown over the energized line greatly increase the risk of outages.

Agreed

BCUC Order G-50-20 Item 5c: Action Items to Address Areas of Risk to Maintaining the KPL System in a Stable Operational State for the Next 3 Months

#36. March 30, 2020 report from TEBurns on KPL powerline system with KCFN comments added.

Electrical Load:

The short-term increase to the available load level from the ESA level of 350 kVA to 432 kVA will alleviate the immediate overload situation. This should be adequate to stabilize this risk for the 3-month period stipulated in BCUC Order G-50-20.

A Primary Service Upgrade request should be made to BC Hydro immediately. The reque ns:

This a SD84 Gr. 1-12 school on SD84 property. Powerline is under KPL jurisdiction. KCFN is intersted in reviewing engineering plans for the recent upgrades.

- o can supply
- s would have
- hree-phase po interconnection?
- What other BC Hydro options might be available.

How would this be co-ordinated? Who would enforce? How would rights to power determined (ie. who gets how much)?

Until further improvements can be made to the system the all customers must be made aware that no load increases can be managed by this KPL system. The newly installed electric boiler system in the school should remain off until further notice.

Vegetation Contact:

To ensure stability for the 3-month period stipulated in BCUC Order G-50-20 some vegetation management will be required to maintain system stability.

Agreed. This is an immediate KCFN concern.

Historically the clearing and brushing on the line has been undertaken by KCFN fallers. I recommend this practice continue.

Consideration should be given to retaining a qualified utility arborist to help identify the most critical areas so that a short-term plan can be prioritized.

Agreed

General Condition of the Line and External Activities:

To ensure stability for the 3-month period stipulated in BCUC Order G-50-20 any previously identified locations where there is hardware or structure damage should be repaired as soon as crews and parts are available on a priority basis.

Agreed

In addition, qualified utility powerline technician should be engaged to patrol of the entire KPL system to identify any other high-risk damage. Agreed

Crews should be dispatched to repair damaged areas on a priority basis.

Helicopter logging over energized lines in not an accepted practice in the utility industry. Agreed
These operations should be halted until:

1. The COVID-19 crisis has passed and response to power outages can be better managed and
2. A proper protocol can be developed such that the line can be de-energized while logs are being flown over the line. Agreed

It is my understanding at the time of writing is that helicopter logging has been temporarily suspended due to operational issues including the COVID-19 pandemic.

BCUC Order G-50-20 Item 5d: Strategy to Form a Working Group of Impacted Ratepayers

A working group consisting of representatives from KPL, KCFN and Walters Island Residents should be formed to develop long term plans to achieve stability on the KPL system.

Items to discuss may include: Agreed. Expect this will require involvment of BCUC and review of original agreements for power rights at issuance of CPCN and subsequent rate adjustments.

- Expectations of the level of utility service and an understanding of the costs and related impacts on electricity rates for providing these service levels.
- Joint utility operating protocol between KPL and the KCFN high voltage network. These protocols should include operating orders for safe network isolation in the case of an emergency and processes for scheduling planned outages
- A process of managing all load additions that will impact the KPL system. This process would apply to the KCFN high voltage network as well as all direct customers of KPL (ie: Walters Island residents, Fair Harbour & School District 84)
- Opportunities for energy conservation.
- Opportunities for alternate energy installation that could benefit all parties.

BCUC Order G-50-20 Item 5e: Strategy for a Full Safety and Condition Assessment Report of the KPL System

A full safety and condition assessment report for the KPL system should be undertaken. The Assessment Report should be undertaken by a qualified professional engineer leading a team consisting of a qualified Power Line Technician, a qualified Utility Arborist and other professionals as identified during the scoping of the project. Agreed

The report should include:

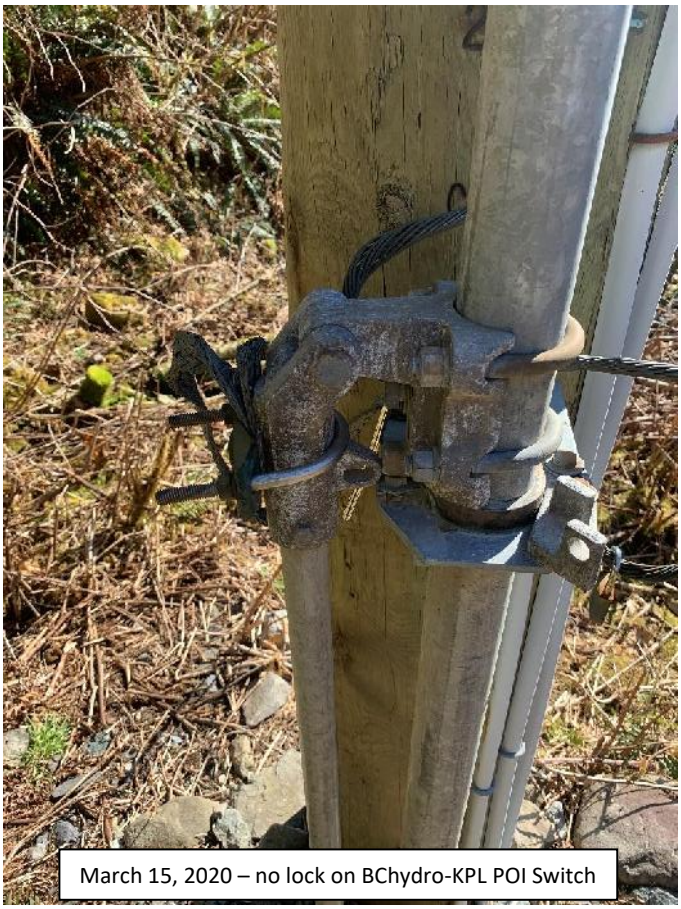
- Detailed, structure by structure assessment of the condition of the line.
- A protection coordination study.
- Review of alternatives for increasing the load capability of the line. This review should be completed in collaboration with BC Hydro.
- High level cost estimates for these alternatives
- Assessment of the condition of the submarine cable.
- Development of a plan to correct deficiencies identified in the detailed assessment.
- High level cost estimates for these repairs.
- Develop annual maintenance and vegetation management plans.
- Develop annual maintenance and vegetation management budgets.
- Review the process for managing forced outages and create written guidelines if required
- Develop a process to manage customer driven load increases.

Agreed

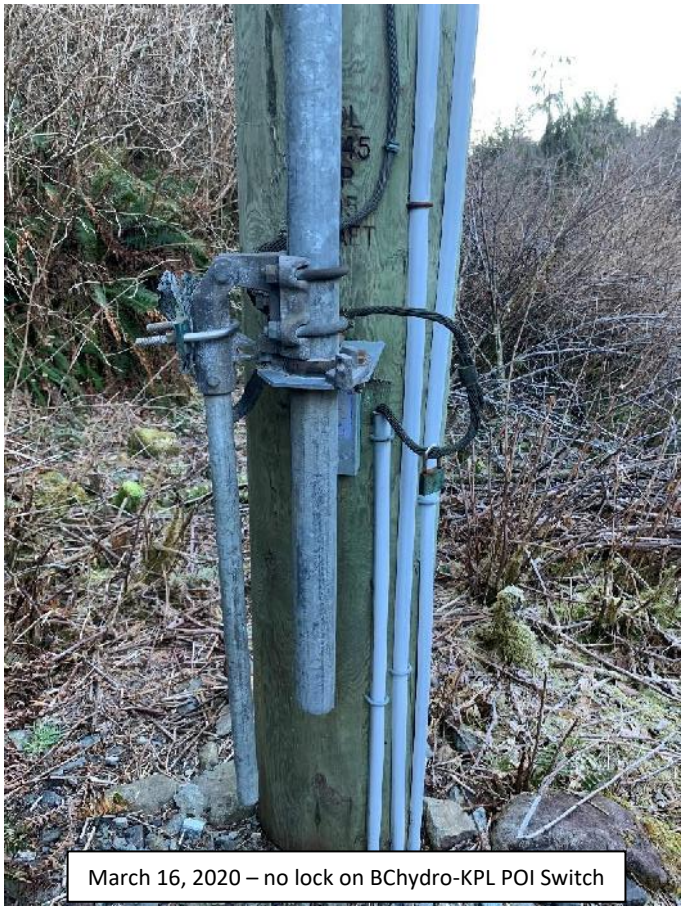
List of Attachments

1. Kyuquot Submarine Cable Details
2. Examples of Clearance & Vegetation Issues and Damage on KPL System

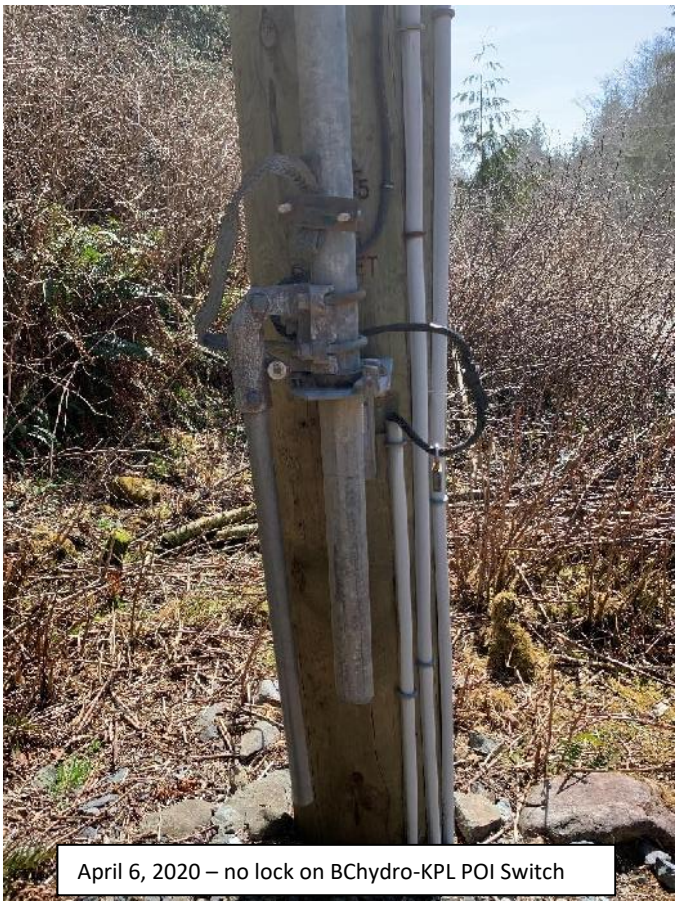
Switch at BCHydro-KPL POI (Mar.15 – April 15, 2020) Photos by Sam Rogers, P.Eng., KCFN Asset Management Advisor



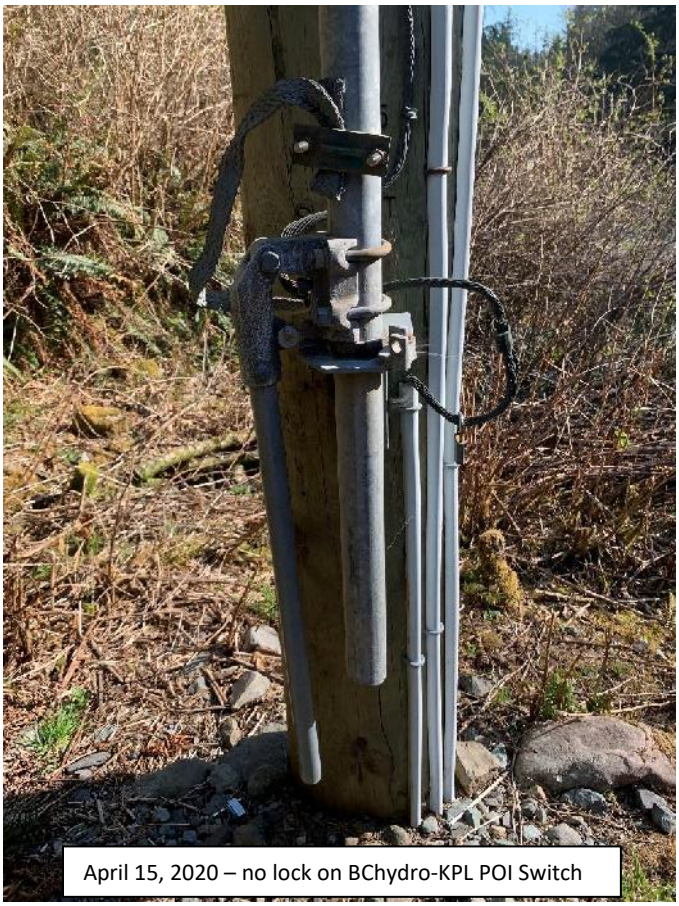
March 15, 2020 – no lock on BChydro-KPL POI Switch



March 16, 2020 – no lock on BChydro-KPL POI Switch



April 6, 2020 – no lock on BChydro-KPL POI Switch



April 15, 2020 – no lock on BChydro-KPL POI Switch

#37. July 27, 2019 email complaint from commercial customer about KPL operations to Synex

From: Eric [redacted]
Sent: Saturday, July 27, 2019 3:39:51 PM
To: Daniel Russell; Eric [redacted]; [redacted]; [redacted]
Subject: Power outage

Hi Daniel
I am one of your commercial customers in Kyuquot.
I just wanted to share my thoughts on the recent power outages.....
I have now lost thousands of dollars due to these outages and I am frustrated by their frequently and long duration.
I am impatient and angry at Kyuquot Power Limited.
The blame certainly isn't with Maritza [redacted]. She is responsive, efficient and kind.

The problem is twofold:

First of all, you are a hydro company with no salaried technicians or on the ground help. When BC Hydro gets called, technicians and linemen are dispatched immediately, usually in a company plane and are on site within several hours. Customers can go to a website and see progress in real time and outages are fixed within hours.

When there is an outage here in Kyuquot, we phone Maritza who immediately phones both an on call person here in Kyuquot to assess the problem and a lineman in Gold River.

The on call person in Kyuquot is amazingly responsive when here, but isn't guaranteed to be here. He also has another job and can't be reached all the time. Consequently, sometimes the problem can't be ascertained by you for many hours after the call comes from Kyuquot.

The lineman in Gold River is part time and is many hours away. This last week he was sick and couldn't come up. Maritza had to call a lineman in Port Alberni who wasn't able to come right away.

Despite the fact that this last outage was caused by a blown fuse which takes just minutes to reset, it took two days to repair.

Your person In Kyuquot couldn't inspect the line until at least twelve hours after Maritza phoned and a lineman had to come up from Port Alberni and didn't arrive until 36 hours or so after the call.

This is understandable due to your company's lack of scale and infrastructure.....not your fault, but none the less, really frustrating for us who have to live with this.

The second problem IS your fault and needs immediate remedy.

The fuse at Ucluje where the line goes from BC Hydro to Kyuquot Power Limited keeps being tripped.

It looks like the capacity of the line has been reached by the good citizens of Kyuquot.

The Kyuquot Checleset First Nations (kCFN) has been ambitiously adding buildings to its infrastructure both here [in Kyuquot] and in ~~Kyuquot~~ [Fair Harbour].

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Residents of the KCFN pay a flat rate for hydro which is subsidized by the Nation. Many residents have switched from wood to electric heat and from propane hot water and cooktops to electric ones.

There has been a trend of the various lodges and businesses (mine included) to add power hungry electric infrastructure such as industrial sized deep freezers and deep fat fryers.

The school is just starting a major refit which includes additional electric boilers and baseboard heaters.

Don't your engineers need to evaluate future projects and existing demand so that the fuses don't trip?
Is there a way to upgrade the system to meet demand?
Can you change your repair system to make it more responsive?

Respectfully yours, Eric[redacted]