



West Kelowna Transmission Project

Stakeholder Communication and Consultation Summary

AUGUST 2018 TO JULY 2019

OCTOBER 2019

BCH19-932

 **BC Hydro**
Power smart

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Introduction

The Stakeholder Communication and Consultation Summary, August 2018 – July 2019 presents the public consultation program and activities that took place within that time frame, as part of the Identification Phase of the West Kelowna Transmission Project.

In this stage of the project, Alternative 2: to Nicola Substation was studied as the leading alternative. These studies started in June 2017, and included environmental, socio-economic, archaeological, traditional use and engineering studies. These studies helped our project planning including line routing and access plans. We also completed a review of Alternative 3.

In March 2019 we announced that due to a higher than expected cost estimate for the leading alternative, a prudent review of the cost estimate and all available alternatives would be undertaken. We also introduced a new project alternative to improve the resiliency of the existing transmission line. Taking the time to thoroughly plan our projects is a key component of our project lifecycle process.

By taking the time to do this work, we'll ensure a cost-effective solution that will continue to deliver clean, reliable electricity to local communities and help keep rates low for our customers.

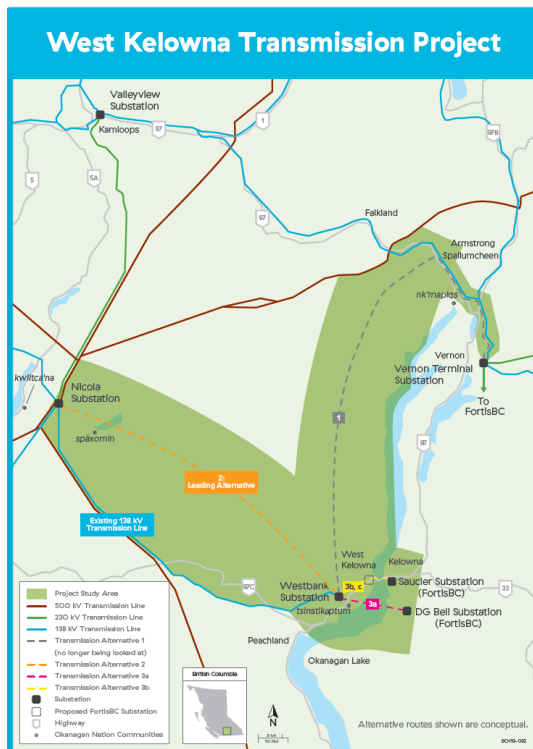
As this work has been underway, we've kept all stakeholders, levels of governments and First Nations informed of the status of this work. This was done through email and website updates, correspondence, delegations to municipal councils and regional districts, open houses, in-person meetings and presentations.

Overview

Project background

We're planning to strengthen and reinforce the transmission network delivering clean, reliable electricity to West Kelowna and Peachland. The project is part of BC Hydro's capital plan and continues to move forward.

From February 2015 until October 2016, we studied three alternatives with options for a new transmission line:



Alternative 1: to Vernon Terminal Substation. Build a new transmission line on the west side of Okanagan Lake, connecting Westbank Substation to Vernon Terminal Substation.

Alternative 2: to Nicola Substation. Build a new transmission line from Nicola Substation to Westbank Substation using a different route than the existing transmission line.

Alternative 3: to FortisBC. Build a new transmission line, including a submarine cable across Okanagan Lake, connecting Westbank Substation to the FortisBC system.

- 3a: Connect Westbank Substation to DG Bell Substation in the FortisBC system.
- 3b: FortisBC builds a new substation in West Kelowna and a transmission line crossing Okanagan Lake to Saucier Substation. BC Hydro then builds a transmission line from Westbank Substation to the new Fortis BC substation.
- 3c: Similar to 3b except it proposes no new substation in West Kelowna. Alternative 3c was identified in early 2017.

In November 2016, Alternative 2: to Nicola Substation was identified as the leading alternative. During this current stage, we continued studies of Alternative 2: to Nicola Substation as the leading alternative for this project through to 2019. They included environmental, socio-economic, archaeological, traditional use and engineering studies. These studies helped our project planning including line routing and access plans. We also completed a review of Alternative 3.

In March 2019, we announced that due to a higher than expected cost estimate for the leading alternative, a prudent review of the cost estimate and all available alternatives would be undertaken. We also introduced a new project alternative to improve the resiliency of the existing transmission line. Taking the time to thoroughly plan our projects is a key component of our project lifecycle process.

Communication and consultation program summary

Identification Phase communication and consultation began in February 2015 when the West Kelowna Transmission Project was announced. Following this initial announcement, the project was introduced to stakeholders and the general public within the project study area, including an initial round of stakeholder meetings and open houses. The document, *Communications and Consultation Summary February 2015 – July 2015* can be provided on request.

In the second round of consultation, from August 2015 – January 2016, we continued to build upon the first round of consultation. The document, *Communications and Consultation Summary August 2015 – January 2016* can also be provided on request.

In the third round of consultation, from February 2016 – October 2016, we shared our preliminary assessment of the three alternatives including safety, environment, cost and socio-economic impacts. The document, *Communications and Consultation Summary February 2016 – October 2016* can also be provided on request.

In the fourth round of consultation, from November 2016 – December 2017, we shared our completed assessment of the three alternatives, identified Alternative 2: to Nicola, as the leading alternative and held additional stakeholder meetings and open houses. We also shared the following information:

- Alternative 2 was assessed as more favourable from an overall safety, environmental, socio-economic, cost, geotechnical and wildfire risk perspective than Alternative 1: Westbank Substation to Vernon Terminal Substation, and Alternative 3: Westbank Substation to FortisBC System.
- Alternative 1 will no longer be studied as it poses the highest level of safety, environmental, socio-economic, cost, geotechnical and wildfire risk.
- An additional review of Alternative 3: to FortisBC is being undertaken to confirm our assessment, and,
- Project's next steps.

In the fifth round of consultation, from January 2018 to July 2018, we kept all stakeholders, levels of governments and First Nations informed of the status of the studies underway for the leading alternative, Alternative 2: to Nicola, and the review of Alternative 3: to FortisBC system. This was done through email and website updates, correspondence, delegations to municipal councils and regional districts, open houses, in-person meetings and presentations.

In the sixth round of consultation, from August 2018 to July 2019, we informed all stakeholders, levels of government and First Nations of the updated alternatives assessment and the results of the review of Alternative 3: to FortisBC system. We also informed all stakeholders, all levels of government and First Nations about the increased cost estimate for the leading alternative, the subsequent cost review of the new line alternatives and the new resiliency alternative. This was done through email and website updates, correspondence, delegations to municipal councils, open houses, in-person meetings and presentations.

Consultation and communication will continue during the next stage of the project with a focus on confirming the preferred alternative.

Methodology

Correspondence & Notification

A stakeholder list was developed prior to the first round of open houses to keep interested parties informed about the project. This list is continually updated and is comprised of members of the public who attended open houses or requested to be kept informed, community groups, businesses, regional districts, senior municipal staff, mayors, councils and current Members of Parliament (MPs) and Members of the Legislative Assembly of British Columbia (MLAs) in the project area. There are currently 428 contacts on the West Kelowna Transmission Project stakeholder list, of which 313 include an email address.

In September 2018, the public was informed of the publishing of the *Stakeholder Communication and Consultation Summary: January 2018 to July 2018*.

In late May 2019, the public was invited to participate in the sixth round of public open houses in West Kelowna (June 5) and Peachland (June 6) through the following:

Ad placement inviting the public to attend an open house in the following local media:

- EZ Rock 101.5
- SUN 99.9FM
- CKFR AM1150
- Peachland View
- Westside Weekly

Email notifications to mayors and council, senior staff of municipalities, and Members of the Legislative Assembly of British Columbia within the project study area.

Email notifications to the West Kelowna Transmission Project stakeholder e-mail list.

- Two rounds of emails (May 23 and June 5, 2019) were sent to the stakeholder email list inviting them to attend one of the two open houses or to contact us by phone or email for more information.
 - At the time of the email notification, there were 306 email addresses on the stakeholder email list.
- Email informing stakeholders about the increased cost estimate for the leading alternative, the subsequent cost review of the new line alternatives and the new resiliency alternative.
- Email informing stakeholders about the published fall 2018 project newsletter.

Project website: www.bchydro.com/wktp

- Updated with the details of consultation opportunities (in-person at open houses and online) and materials such as the open house storyboards and a copy of the fall 2018 project newsletter.

A copy of the open house advertisements and postcard are included in Appendix A.

Open houses

The sixth round of West Kelowna Transmission Project open houses was held in June 2019. These open houses were a drop-by format, allowing visitors to learn about the project at their own pace, and to engage in conversation with the project team on the issues important to them.

The open houses were held in two communities in the project study area:

Community	Date and time	Location
West Kelowna	June 5, 2019 6:00 p.m. to 8:00 p.m.	Westbank Lions Community Centre 2466 Main St, West Kelowna, B.C.
Peachland	June 6, 2019 6:00 p.m. to 8:00 p.m.	Peachland Community Centre 4450 6th Street, Peachland, B.C.

These open houses were intended to inform stakeholders of the latest information on the status of the new transmission line alternatives (redundancy) and the work underway as part of the resiliency alternative. The open house also provided information on the Westbank Substation Upgrades project announced in the fall of 2018.

We displayed a set of 18 storyboards at each of the open houses with text, graphics and maps (see Appendix A).

The open house storyboards were made available on the project website as part of the online consultation.

The project team, including project management, stakeholder engagement, system planning, engineering, properties, environment and indigenous relations, were at the open houses to answer questions and hear comments. Feedback forms were also available to participants.

In total, there were 12 attendees at the open house in West Kelowna and 7 attendees at the open house in Peachland.

Newsletter

In December 2018, an 8-page project update newsletter. This included an overview of the updated alternatives assessment. The newsletter was emailed to local governments, the project stakeholder list and posted on the project website at www.bchydro.com/wktp.

Wildfire risk assessment and fire protection plan

In June 2019, we shared the updated Wildfire Risk Assessment report as well as the fire plan for the existing line for 2019. This was emailed to local governments, the project stakeholder list and posted on the project website at www.bchydro.com/wktp.

Westside Daze

Westside Daze is a multi-day community event on July 12-14 in West Kelowna. The BC Hydro Community Team participated in this important community event. As part of this participation, the Community Team was prepared to answer questions and provide information on the status of the West Kelowna Transmission Project as well as the Westbank Substation Upgrades Project. No questions were received.

Web / Online Updates

A project website was established when the project was announced. The site can be found at www.bchydro.com/wktp.

These pages have been regularly updated as the project moves through the Identification phase. The site includes sections highlighting “What’s New” and “Reports and Documents” where stakeholders can find the latest project files and reports such as storyboards from recent open houses and the Stakeholder Communications and Consultation Summary reports.

From August 2018 to July 2019, these pages have been updated to ensure all stakeholders can access project updates, next steps and project files on a regular basis.

Local government meetings

Between August 2018 and July 2019, we met with senior staff and/or elected officials of local governments, to provide project updates.

These meetings built on meetings held in 2015, 2016, 2017 and 2018. To date, we’ve had a total of 40 meetings with local governments.

Local government	Meeting date
Regional District Central Okanagan	October 23, 2017 July 14, 2016 February 17, 2016 March 23, 2015
City of Kelowna	July 20, 2017 February 6, 2017 June 23, 2016 November 14, 2015
City of West Kelowna	April 16, 2019 March 18, 2019, November 27, 2018 May 22, 2018 September 27, 2017 September 5, 2017 July 20, 2017 February 6, 2017

Local government	Meeting date
	January 10, 2017 September 28, 2016 June 23, 2016 June 14, 2016 November 13, 2015 March 24, 2015
City of Vernon	June 13, 2016 November 12, 2015 June 4, 2015
District of Peachland	April 23, 2019 March 18, 2019, November 13, 2018 May 22, 2018 September 5, 2017 January 10, 2017 November 8, 2016 June 14, 2016 November 26, 2015 March 25, 2015
Township of Spallumcheen	June 6, 2016 June 4, 2015
Columbia-Shuswap Regional District	August 18, 2016
Thompson-Nicola Regional District	February 8, 2018 July 14, 2016

Feedback

Feedback from stakeholders

During this period, we received some feedback and questions from stakeholders.

We received 15 emails regarding the project. Feedback included:

- Four emails requesting to be added to the email distribution list.
- One email encouraging BC Hydro to work towards a 2022 in-service date.
- One email with a question about the open house dates.
- One email asking for information on construction materials.
- Three emails requesting more detailed maps.
- Two emails suggesting alternatives to a new transmission line that would help to improve reliability in the area.

- One email expressing concern about delays.
- Two emails about economic opportunities related to the project.

We received no phone calls.

We received two letters.

- One letter received in November 2018 asking the that project keep on track for a 2022 completion date.
- One letter received in June 2019 suggesting BC Hydro consider a number of factors and demographics to gain approval to build a more secure and reliable transmission circuit in to West Kelowna and Peachland.

We received zero feedback forms at the June 2019 open houses.

Feedback from local government

We received written feedback from the Thompson-Nicola Regional District (a copy of the letter can be found in Appendix C).

City of West Kelowna and the District of Peachland

In April, we received letters from mayors and council at both the the City of West Kelowna and the District of Peachland expressing that they do not support the resiliency alternative (See Appendix C). These letters were in follow up to a delegation to both councils earlier in the month.

Collaborating with First Nations

We place a high value on our relationship with First Nations; the input and participation of First Nations is crucial to all of our projects. We're collaborating with the Okanagan Nation Alliance and member communities as well as other First Nations to understand and address their interests throughout the life of the project.

We're working in collaboration with the Okanagan Nation Alliance and member communities to develop and execute the field studies for this stage of the project. Additionally, the Okanagan Nation Alliance and member communities and other First Nations are delivering Traditional Use studies to inform the project work.

Next steps

In this stage of the project, we'll continue to move forward with project work for the resiliency and new line alternatives. We hope to make a decision on the preferred alternative in 2020. Once a preferred alternative is confirmed, the project timeline and in-service date will be updated.

Ongoing communication

We'll continue to provide information and respond to your enquiries as the project proceeds. If you'd like to learn more about the project or provide your feedback, please get in touch with us:

- Phone: 1 866 647 3334
- Email: projects@bchydro.com
- Website: www.bchydro.com/wktp

Appendix A:

June 2019 open house materials

BC Hydro open house

West Kelowna Transmission Project & Westbank Substation Upgrade Project

Join us at one of our upcoming open houses to learn more about the West Kelowna Transmission Project and the Westbank Substation Upgrade Project.

Drop in anytime between 6 p.m. and 8 p.m. on:

Wednesday, June 5, 2019—West Kelowna

Westbank Lions Community Centre,
2466 Main St, West Kelowna

Thursday, June 6, 2019—Peachland

Peachland Community Centre,
4450 6th St, Peachland

Can't make it? Contact us at 1 866 647 3334 or projects@bchydro.com, or visit bchydro.com/wktp



5618

Publication: Peachland View (GM)
Size: 6.5" x 72 lines
Insertion date: May 24, 31
Deadline: May 17

BC Hydro open house

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5618

Publication: Westside Weekly (GM)
Size: 5.167" x 72 lines
Insertion date: May 24, 31, June 5
Deadline: May 21

West Kelowna Transmission Project & Westbank Substation Upgrade Project

**Come see what
we're studying!**

June 5 & 6, 2019

 **BC Hydro**
Power smart

BCH1-9474

Join us at one of our upcoming open houses to learn more about the West Kelowna Transmission Project and the Westbank Substation Upgrade Project.

West Kelowna Transmission Project: We're planning to strengthen and reinforce the transmission network delivering clean, reliable electricity to West Kelowna and Peachland. The project is part of BC Hydro's capital plan and continues to move forward.

Westbank Substation Project: The Westbank Substation Upgrade Project will ensure we continue to provide clean, reliable energy to the communities of West Kelowna and Peachland. The substation on Shannon Lake Road, near Kinsmen Park will receive upgrades that will increase capacity, replace end-of-life equipment and accommodate a connection for a new transmission line.

Drop in anytime between 6:00 p.m. and 8:00 p.m. on:

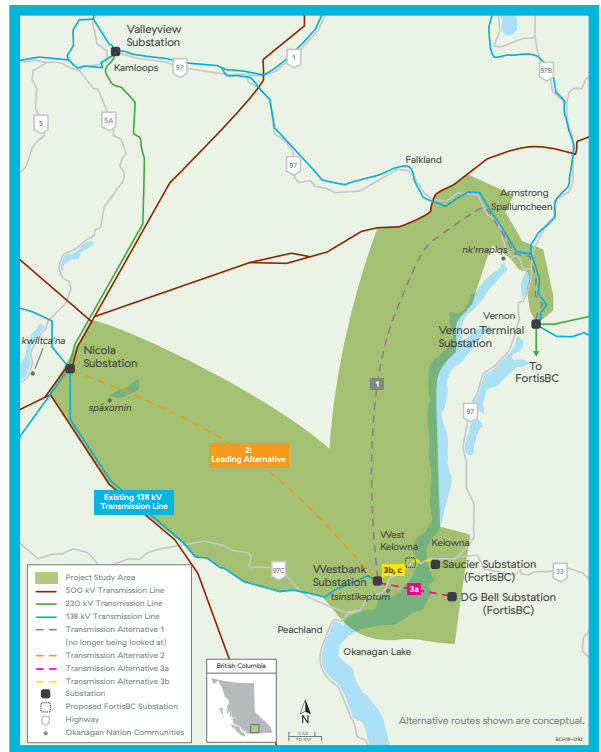
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Collaboration with the Okanagan Nation and other First Nations is underway. Stakeholder engagement activities with local governments in the project area are ongoing.

Welcome to the BC Hydro open house



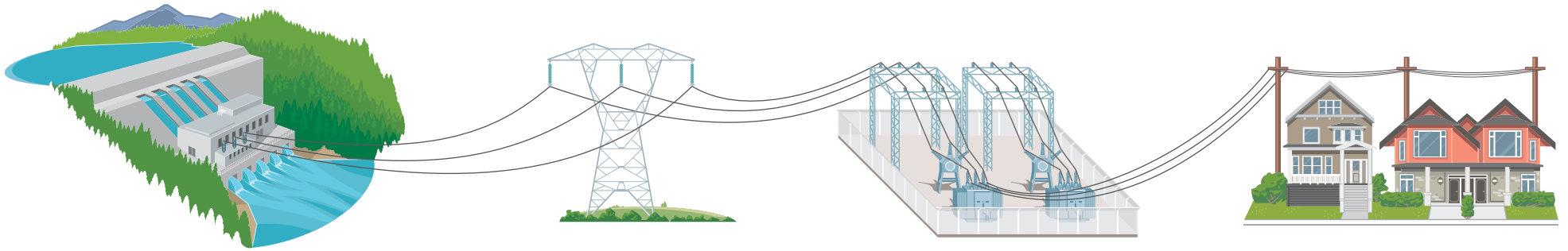
West Kelowna Transmission Project

We're planning to strengthen and reinforce the transmission network delivering clean, reliable electricity to West Kelowna and Peachland. The project is part of BC Hydro's capital plan and continues to move forward.

Westbank Substation Project

The Westbank Substation Upgrade Project will ensure we continue to provide clean, reliable electricity to the communities of West Kelowna and Peachland. The substation on Shannon Lake Road, near Kinsmen Park will receive upgrades that will increase capacity, replace end-of-life equipment and accommodate a connection for a new transmission line.

Our electricity system



Generation

Electricity is generated by BC Hydro and independent power producers.

Transmission

Electricity is moved from where it's produced to where it's used.

Substations

Voltage is reduced at substations to provide power suitable for use in your home or business.

Distribution

Low voltage electricity is provided to neighbourhoods and businesses.

West Kelowna Transmission Project



Collaborating with First Nations



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We're collaborating with the Okanagan Nation Alliance and member communities as well as other First Nations to understand and address their interests throughout the life of the project.

During this stage of the project, we're working in collaboration with the Okanagan Nation Alliance and member communities to develop and execute the field studies. Additionally, the Okanagan Nation Alliance and member communities and other First Nations are delivering Traditional Use studies to inform this stage of the project.

West Kelowna Transmission Project



Project timeline

- In February 2015, the project was announced to construct a new, secondary transmission line.
- Spring 2015 to fall 2016, we studied three alternatives.
- Fall 2016, Alternative 2: Westbank Substation to Nicola Substation was identified as the leading alternative for further study.
- **Spring 2019, work started on the new Resiliency Alternative.**
- Confirm preferred alternative in early 2020 at the earliest.

West Kelowna Transmission Project

Project status: moving forward

The West Kelowna Transmission Project is in our Capital Plan and continues to move forward.

Fall 2018, estimated costs to build the leading alternative are higher than expected due to:

- the longer line (up to 100 km from 72 km),
- the increased number and type of poles, and,
- the amount of time and approach needed to construct the line.

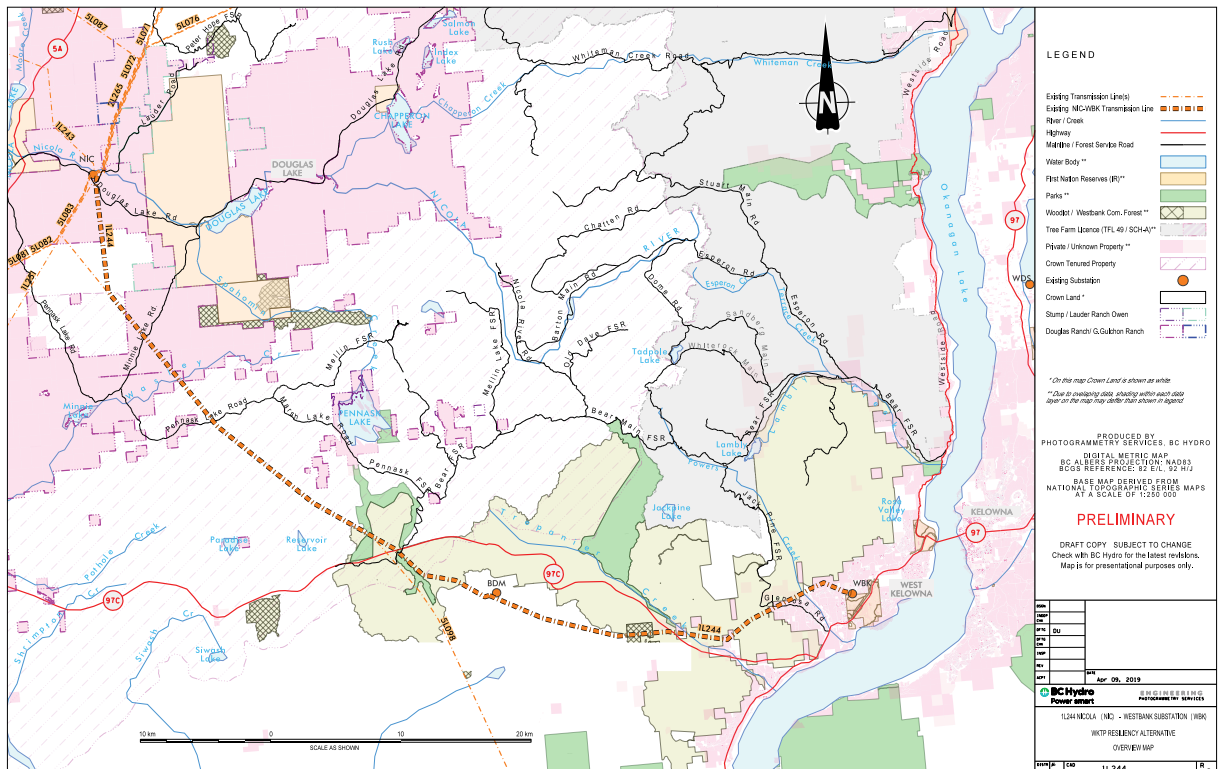
BC Hydro must fully consider, consult on and assess all feasible alternatives including a new alternative focused on improving the resiliency of the existing transmission line to minimize the risk of outages resulting from forest fires and geotechnical events.

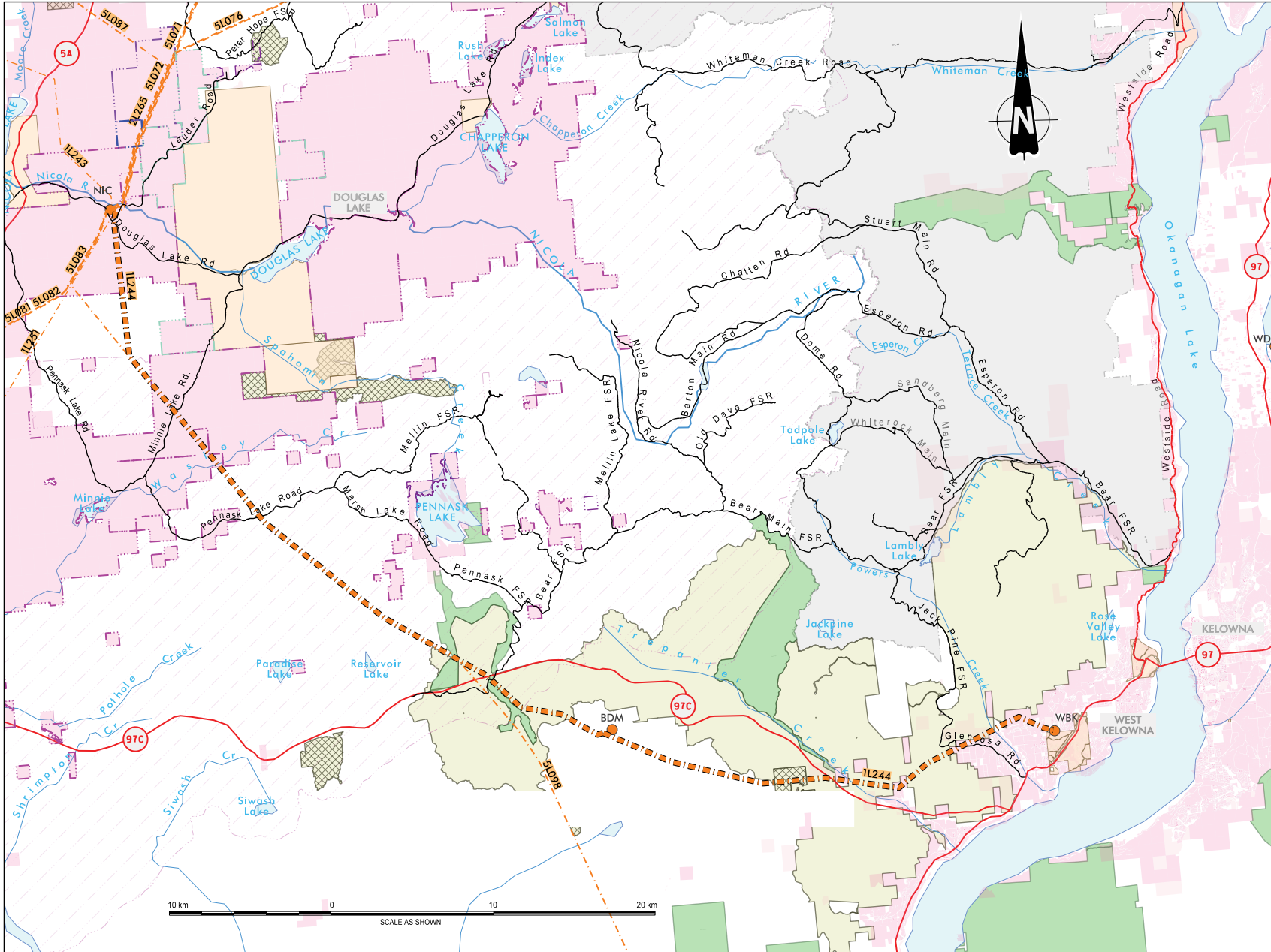


West Kelowna Transmission Project

Existing transmission line

- The Westbank Substation is supplied by a single 80 km, radial 138 kV transmission line from Nicola Substation to Westbank Substation constructed in 1967.
- Second largest communities in the BC Hydro system supplied by a radial transmission line.
- Serves 22,000 customers in West Kelowna and Peachland.





- ### LEGEND
- Existing Transmission Line(s)
 - Existing NIC-WBK Transmission Line
 - River / Creek
 - Highway
 - Mainline / Forest Service Road
 - Water Body **
 - First Nation Reserves (IR)**
 - Parks **
 - Woodlot / Westbank Com. Forest **
 - Tree Farm Licence (TFL 49 / SCH-A)**
 - Private / Unknown Property **
 - Crown Tenured Property
 - Existing Substation
 - Crown Land *
 - Stump / Lauder Ranch Owen
 - Douglas Ranch/ G.Gulchon Ranch

* On this map Crown Land is shown as white.
 ** Due to evolving data, shading within each data layer on the map may differ than shown in legend.

PRODUCED BY
 PHOTOGRAMMETRY SERVICES, BC HYDRO
 DIGITAL METRIC MAP
 BC ALBERS PROJECTION: NAD83
 BCGS REFERENCE: 82 E/L 92 H/J
 BASE MAP DERIVED FROM
 NATIONAL TOPOGRAPHIC SERIES MAPS
 AT A SCALE OF 1:250 000

PRELIMINARY
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 Check with BC Hydro for the latest revisions.
 Map is for presentational purposes only.

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1L244 NICOLA (NIC) - WESTBANK SUBSTATION (WBK)
 WKTP RESILIENCY ALTERNATIVE
 OVERVIEW MAP

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West Kelowna Transmission Project

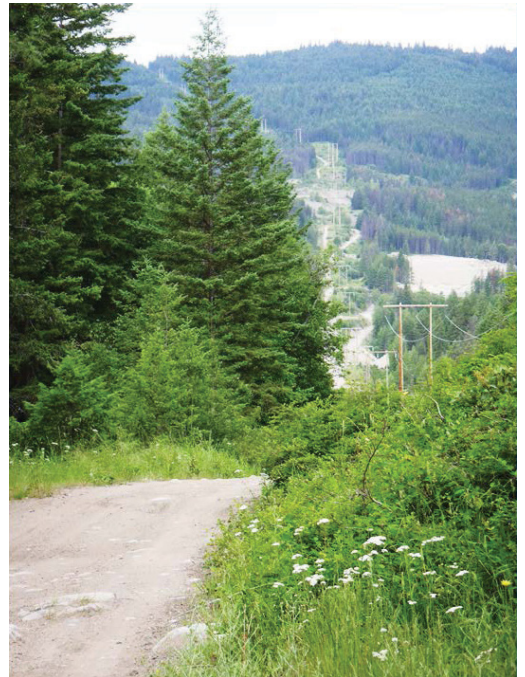
Performance of the existing transmission line

In the past 20 years:

- 4 unplanned outages
- 16 total outage hours
- 4 average hours per outage
- 9 hour maximum outage duration

Vegetation maintenance and fire protection:

- Conduct two vegetation patrols per year along entire length of the line.
- Use mechanical mowing where possible to keep fuel loads to a minimum.
- Significant mowing and hazard tree maintenance in right-of-way planned this year.
- Apply fire retardant to wood pole structures.
- Replace wood poles and equipment to reduce probability of pole-top fires.
- Maintain access to reduce the outage duration.
- Active fire monitoring and response system.



West Kelowna Transmission Project

Resiliency alternative

Options that will be studied:

- Enhanced access maintenance, vegetation removal around poles and fire retardant application to wood poles.
- Replacing wood poles with steel or fibreglass poles in highest-risk and difficult to access areas; base protection for poles; and expanding the width of the existing right-of-way.
- Improving permanent access, response plans and specialized equipment.



Example of an H-frame structure



Poles treated with fire protection survive a fire in Falkland in 2011.

2019 Fire Protection Program

BC Hydro takes fire protection measures to protect its infrastructure from wildfires.

Fire protection work for the existing transmission line running from Nicola Substation to Westbank substation includes:

- brushing around the base of structures, and,
- the application of fire retardants to the bottom section of poles.

This fire protection work is generally effective for 2 to 3 years.

West Kelowna Transmission Project

Next steps

Work for the Resiliency Alternative will include:

- Wildfire and geotechnical assessments.
- Environmental overview assessment and an archaeological assessment.
- Ongoing consultation and engagement with First Nations, governments and stakeholders.
- An assessment of the options.
- A detailed review of the costs for all the alternatives.



Cultural plant knowledge holder with Trapper's Tea



WKTP Open House in West Kelowna, November 2017.

West Kelowna Transmission Project

Identifying a preferred alternative

Our work on the new secondary line alternatives and the Resiliency Alternative will help inform our decision on the preferred alternative.

We expect the decision timeline will extend to early 2020 at the earliest to ensure all required data has been gathered to support the decision and subsequent application to the BC Utilities Commission.

Key aspects will include:

- Safety
- Environment
- Cost
- Socio-economic
- First Nations
- Stakeholders
- Wildfire
- Geotechnical

The project in-service date will be updated once a preferred alternative is confirmed.

Westbank Substation Upgrade Project

Project overview



- In-service since the early 1970s.
- Serves more than 22,000 customers in West Kelowna and Peachland.
- Supplied by one 138 kilovolt transmission line from Nicola Substation.
- Upgrades will increase capacity, replace end-of-life equipment and accommodates a connection for a new transmission line.

Westbank Substation Upgrade Project

Why are the upgrades needed

We need to upgrade the Westbank Substation in order to:

- Meet the peak electricity demand, which is expected to grow in the coming years.
- Replace major equipment that is at or near end-of-life.



Westbank Substation Upgrade Project



Westbank Substation Upgrade Project

Environment and engineering studies

We've started the following desktop and field studies:

- Archaeological Impact Assessment
- Soil Characterization
- Wildlife and Vegetation Studies
- Management of oil-filled equipment
- Geotechnical Investigations
- Property Line Survey

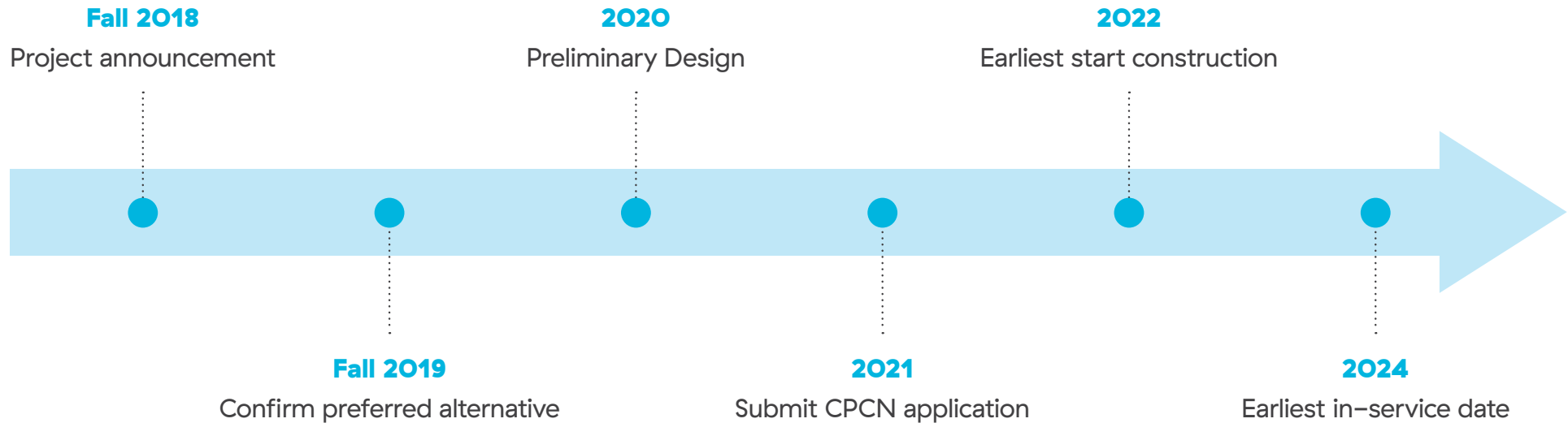


Westbank Substation Upgrade Project

Next steps

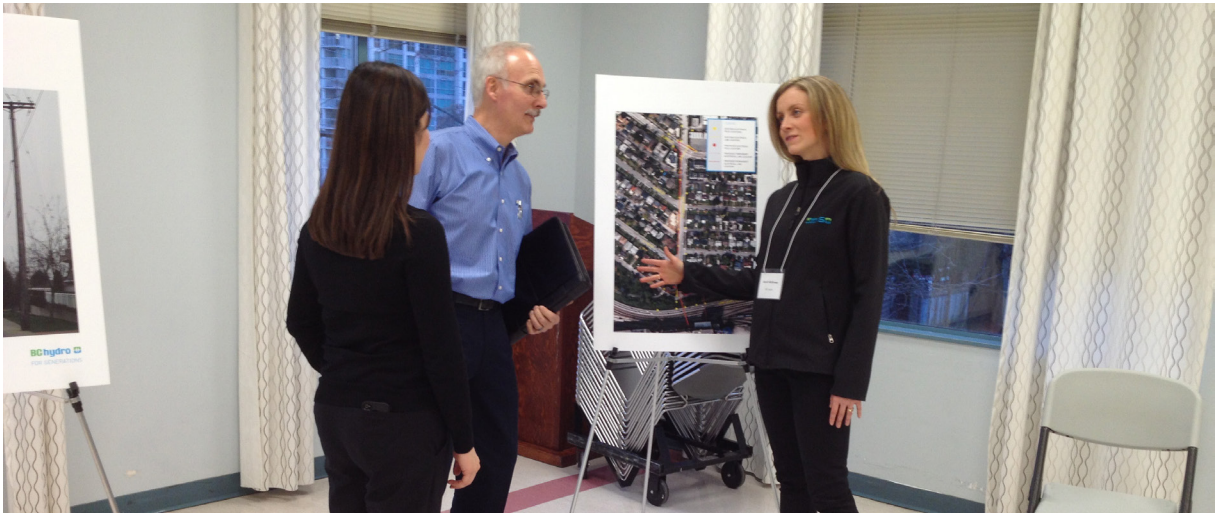


- Complete studies and designs.
- Next round of Public Open Houses anticipated for June 2019.
- The project will require a Certificate of Public Necessity and Convenience (CPCN) application to be submitted to the BC Utilities Commission (BCUC).



West Kelowna Transmission Project & Westbank Substation Upgrade Project

More information



Consultation and engagement will be ongoing throughout the West Kelowna Transmission Project and the Westbank Substation Upgrade Project. If you have any questions or comments on our project work, you can reach us at:

Email: projects@bchydro.com

Phone: 1 866 647 3334

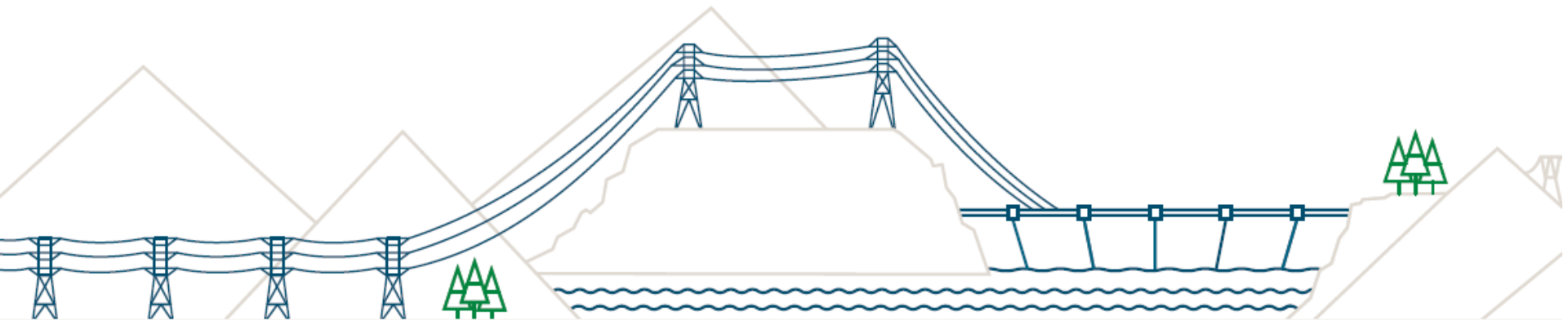
You can also find the latest project information on our website.

- For information on the West Kelowna Transmission Project, visit bchydro.com/wktp
- For information on the Westbank Substation Project, visit bchydro.com/westbanksub

Appendix B:

Presentations to local governments

West Kelowna Transmission Project



November 2018

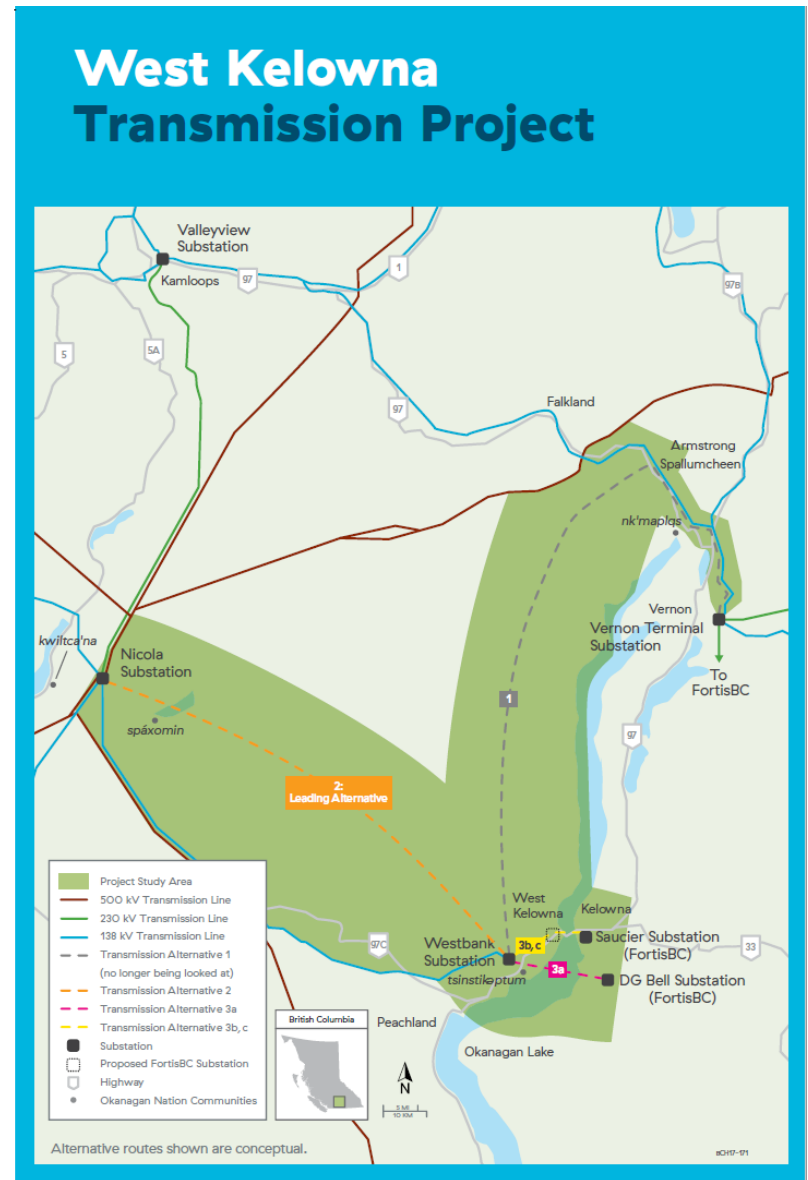
Agenda

- Project overview
- Work in this stage
- Identifying a preferred alternative
- Updated alternatives assessment
- Preliminary study corridors
- Project timeline



Project overview

- Spring 2015 to fall 2016, studied three alternatives.
- Fall 2016, Alternative 2: to Nicola Substation was identified as the leading alternative and for further study.
- Additional review of Alternative 3: to FortisBC undertaken to confirm our assessment.
- No plans to continue to study Alternative 1: to Vernon Terminal Substation as it poses the highest levels of risk compared to the other alternatives.
- A decision on the preferred alternative is expected to be made in early 2019.



Leading alternative, Alternative 2: to Nicola Substation

In this stage we are:

- Continuing to consult with First Nations and stakeholders.
- Conducting desktop and field environmental, socio-economic, archaeological, traditional use and engineering studies.
- Completing geotechnical investigations on the ground.
- Completing a field and desktop wildfire risk assessment.
- Selecting transmission line structure type, conductor size, configuration and substation layout requirements.
- Beginning to look at routing options.



Identifying a preferred alternative

- We expect to make a decision on our preferred alternative in early 2019.
- Desktop and field studies, First Nations consultation and stakeholder engagement will inform our decision making process.
- Key aspects will include:
 - Safety
 - Environment
 - Cost
 - Socio-economic
 - First Nations and stakeholders
 - Wildfire
 - Geotechnical



Updated assessment

Comparing the alternatives

Assessment Criteria	Alternative 1	Alternative 2, Leading Alternative	Alternative 3a	Alternative 3b	Alternative 3c
Safety	●	●	●	●	●
Environment	●	●	●	●	●
Cost	●	●	●	●	●
Socio-economic	●	●	●	●	●
First Nations*	●	●	●	●	●
Stakeholders*	●	●	●	●	●
Reliability**	●	●	●	●	●

*First Nations and Stakeholders assessment from 2016. Will be updated at the end of 2018.

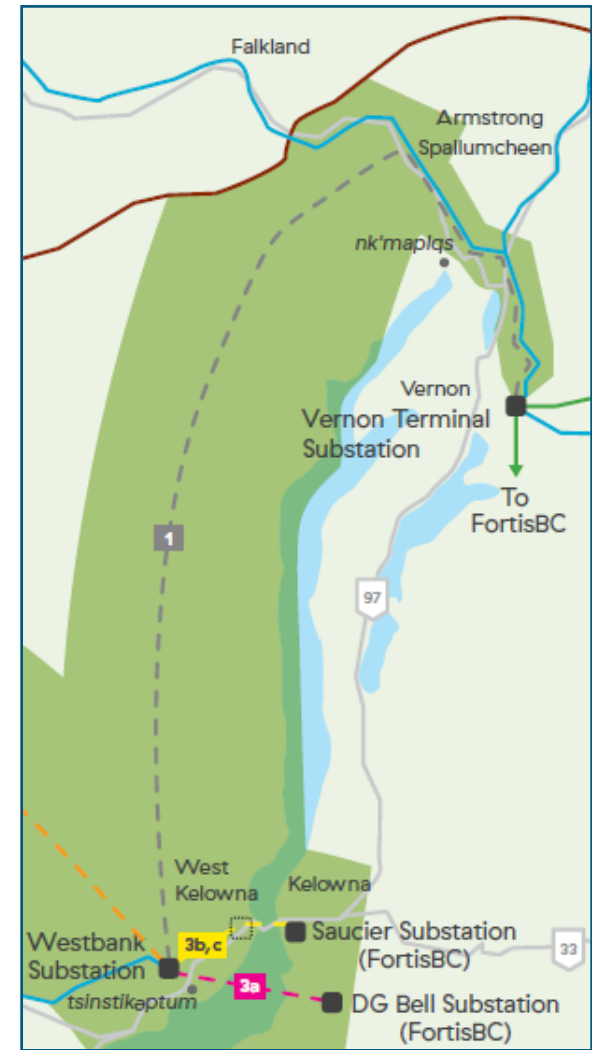
**Reliability includes Wildfire Risk and Geotechnical Risk as well as other factors.

● High ● Moderate ● Low

Updated assessment

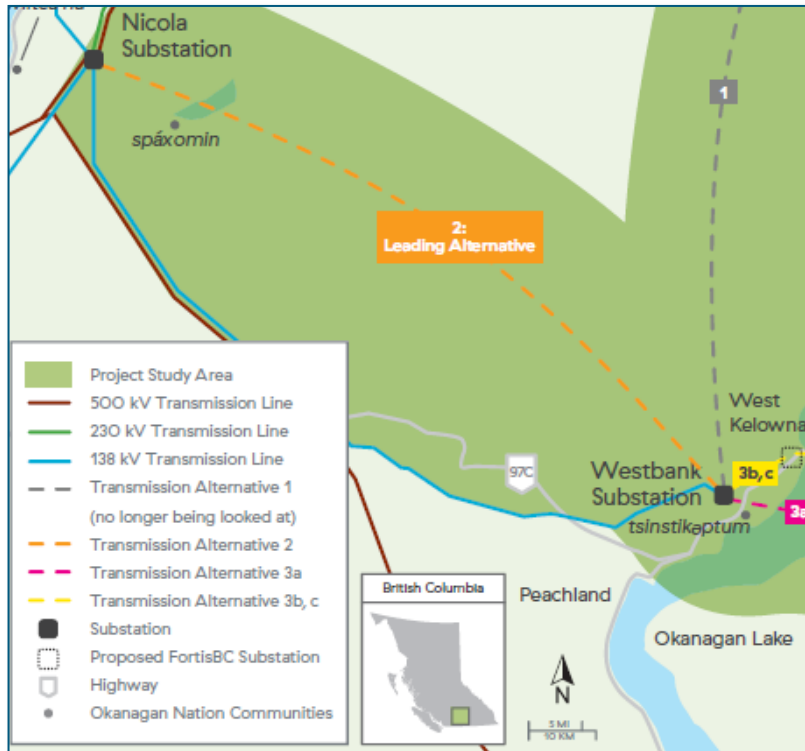
Alternative 1: to Vernon Terminal Substation

- Safety
- Environment
- Cost
- Socio-economic
- First Nations
- Stakeholders
- Reliability



Updated assessment

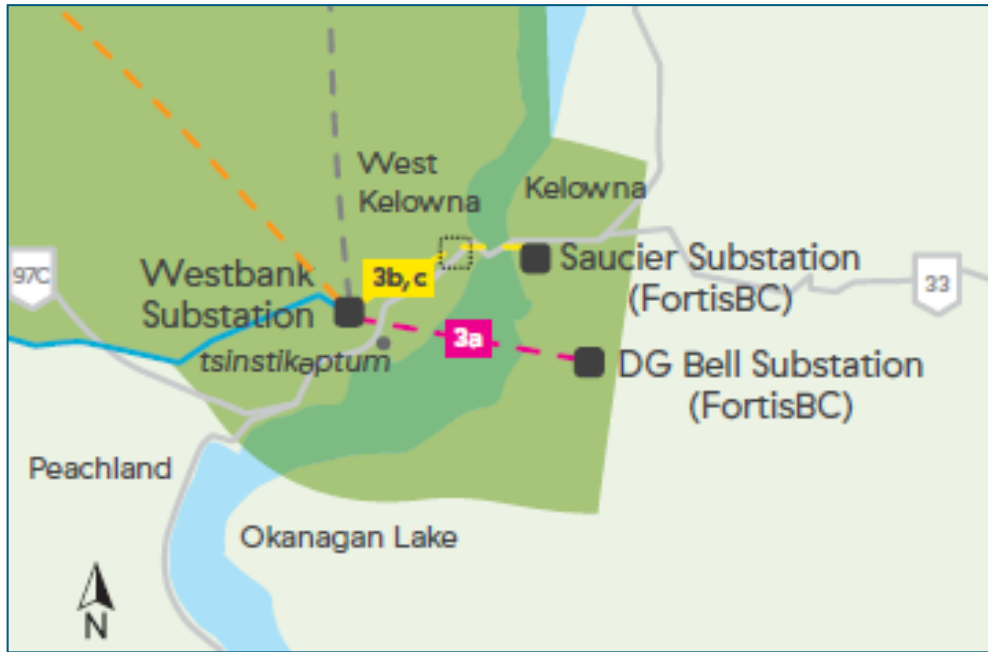
Leading alternative, Alternative 2: to Nicola Substation



- Safety
- Environment
- Cost
- Socio-economic
- First Nations
- Stakeholders
- Reliability

Updated assessment

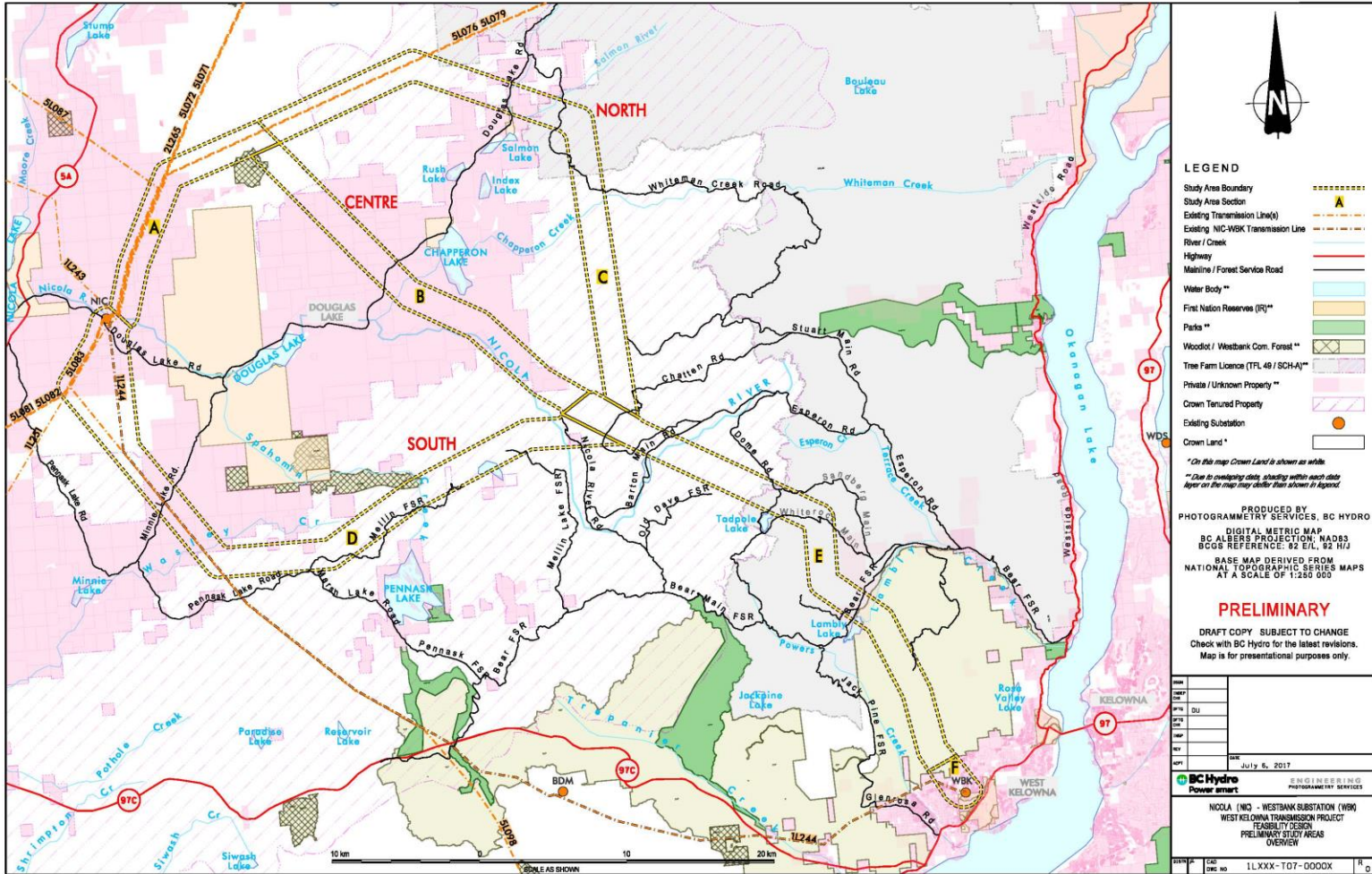
Alternative 3: to FortisBC



- Safety
- Environment
- Cost
- Socio-economic
- First Nations
- Stakeholders
- Reliability

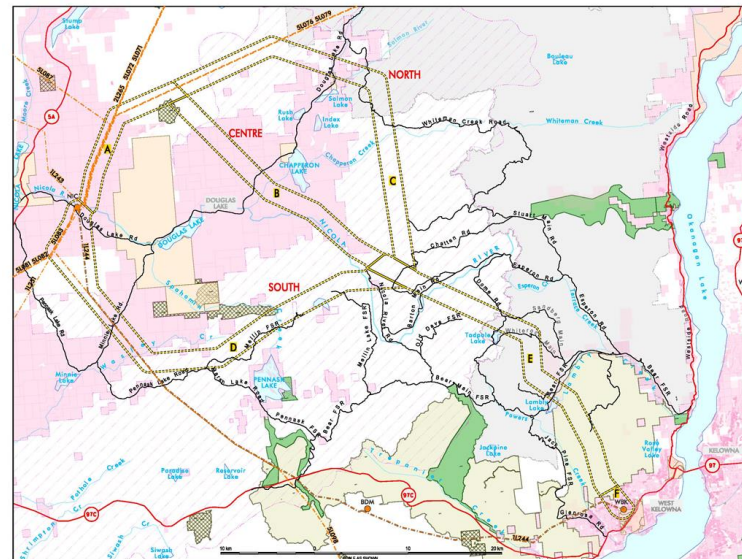
Leading alternative, Alternative 2: to Nicola Substation

Preliminary study corridors



Identifying a preferred corridor

- We expect to make a decision on the preferred corridor in early 2019 using a structured decision making process.
- Desktop and field studies, First Nations consultation and stakeholder engagement will inform our decision making process.
- Key aspects will include:
 - Safety
 - Environment
 - Cost
 - Socio-economic
 - First Nations and stakeholders
 - Wildfire
 - Geotechnical
- We will come to you with the corridor assessment in early 2019.



Project timeline

Updated In-Service Date

- The earliest in-service date has moved to 2025 from 2022.
- The change takes into account the time needed for:
 - regulatory permits, approvals and authorizations, and,
 - completion of field studies and construction.
- The schedule will continue to be updated as the project progresses.



*Construction will not commence until the project is approved by the BC Utilities Commission (if required) and a final investment decision is supported by BC Hydro's Board of Directors.

Looking ahead

Next steps

- We expect to make a decision on our preferred alternative and preliminary study corridor in early 2019.
- Definition Phase will begin in early 2019 and will include:
 - Continuing to consult with First Nations and stakeholders.
 - Conducting a centerline survey, geotechnical investigations, environmental field studies, forestry engineering field work.
 - Development and submission of a Certificate of Public Convenience and Necessity application.



*Construction will not commence until the project is approved by the BC Utilities Commission (if required) and a final investment decision is supported by BC Hydro's Board of Directors.



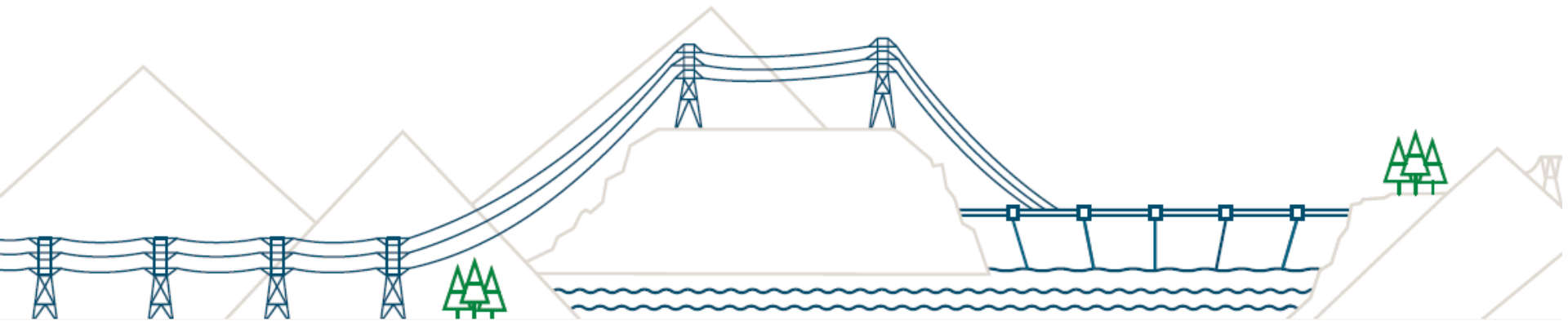
BC Hydro

Power smart

West Kelowna Transmission Project

Sue Foster, Project Manager

Sabrina Locicero, Stakeholder Engagement



April 2019

Agenda

- Project timeline
- Project status
- Existing line and performance
- Resiliency Alternative
- Next steps
- Identifying a preferred alternative



West Kelowna Transmission Project

West Kelowna Transmission Project



Timeline:

- In February 2015, the project was announced to construct a new, secondary transmission line.
- Spring 2015 to fall 2016, we studied three alternatives.
- Fall 2016, Alternative 2: Westbank Substation to Nicola Substation was identified as the leading alternative for further study.
- **Spring 2019, work started on new Resiliency Alternative.**
- Confirm preferred alternative in early 2020 at the earliest.

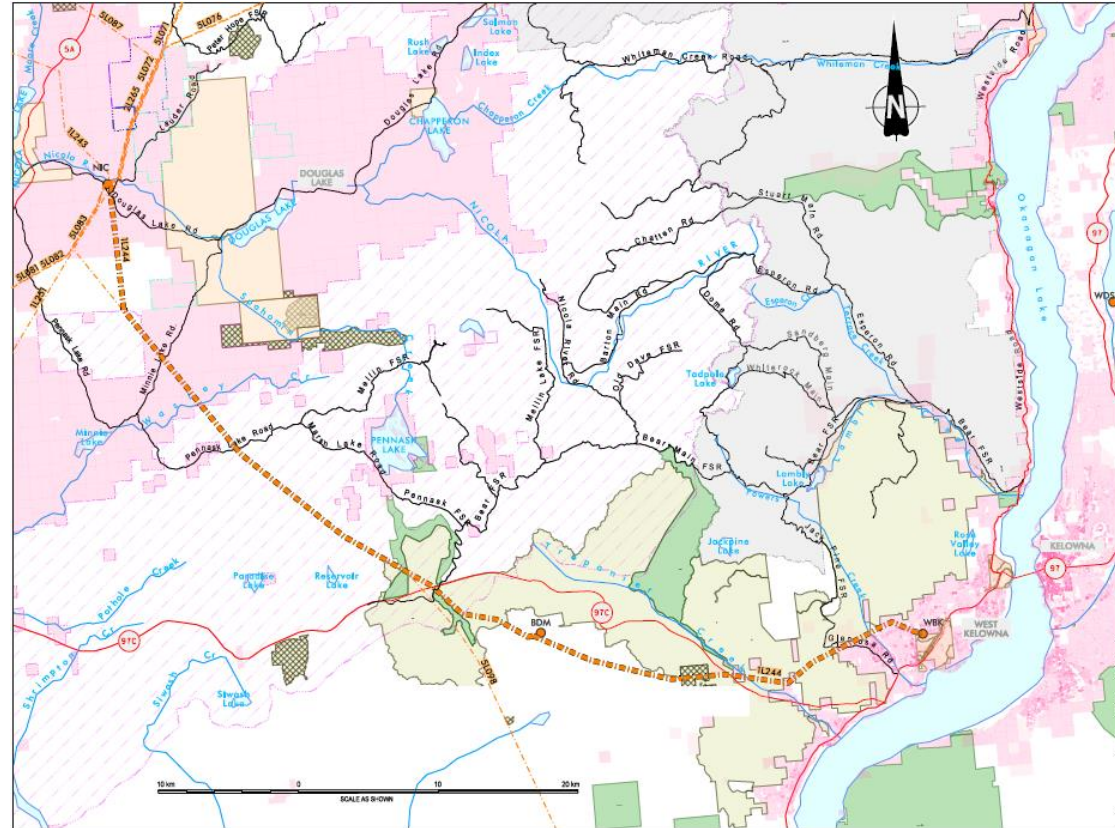
Project Status

- The West Kelowna Transmission Project is in our Capital Plan and continues to move forward.
- Fall 2018, estimated costs to build the leading alternative are higher than expected due to:
 - the longer line (up to 100km from 72km),
 - the increased number and type of poles, and,
 - the amount of time and approach needed to construct the line.
- BC Hydro must fully consider, consult and assess all feasible alternatives including a new alternative focused on improving the resiliency of the existing transmission line to minimize the risk of outages resulting from forest fires and geotechnical events.



The Existing Line

- The Westbank Substation is supplied by a single 80 km, radial 138 kV transmission line from Nicola Substation Westbank Substation constructed in 1967.
- Second largest communities in the BC Hydro system supplied by a radial transmission line.
- Serves 22,000 customers in West Kelowna and Peachland.



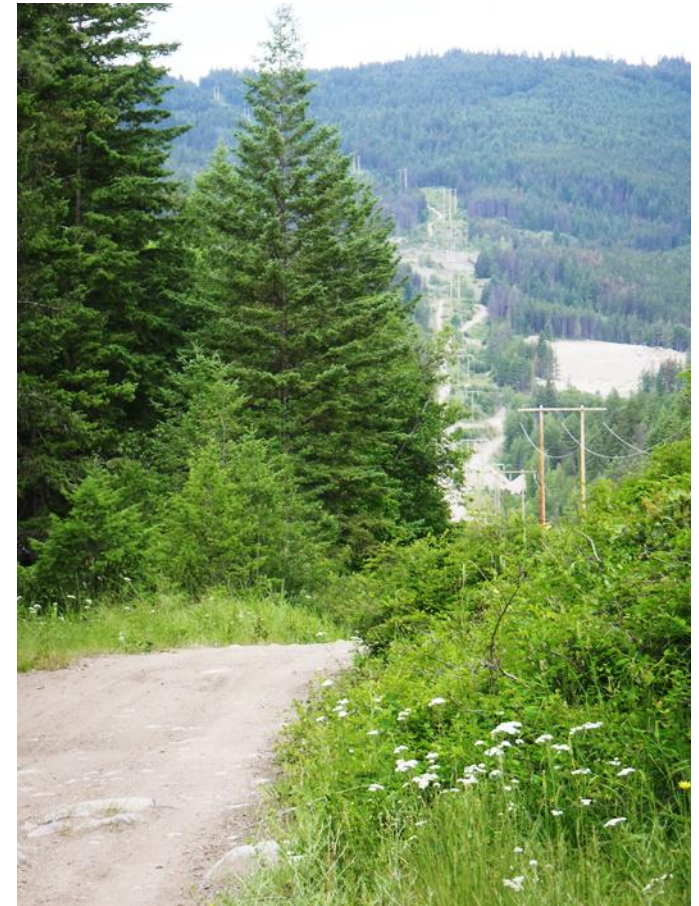
Performance of the Existing Line

In the past 20 years:

- 4 unplanned outages
- 16 total outage hours
- 4 average hours per outage
- 9 hour maximum outage duration

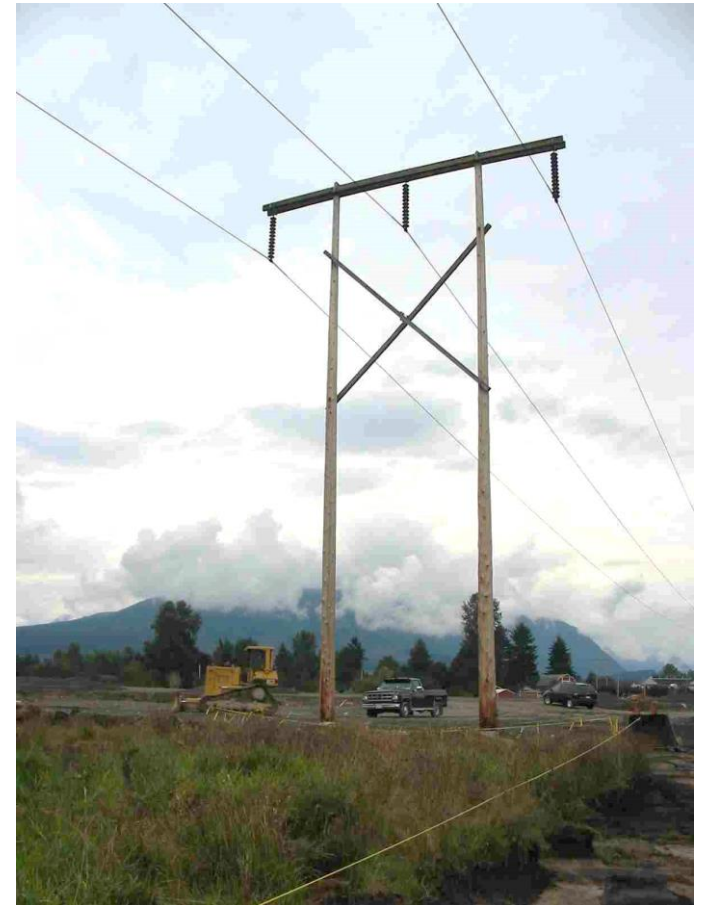
Vegetation Maintenance and Fire Protection:

- Conduct two vegetation patrols per year along entire length of the line.
- Use mechanical mowing where possible to keep fuel loads to a minimum.
- Significant mowing and hazard tree maintenance in right-of-way planned this year.
- Apply fire retardant to wood pole structures.
- Replace wood poles and equipment to reduce probability of pole-top fires.
- Maintain access to reduce the outage duration.
- Active fire monitoring and response system.



Resiliency Alternative

- Options that will be studied:
 - Enhanced access maintenance, vegetation removal around poles and fire retardant application to wood poles.
 - Replacing wood poles with steel or fibreglass poles in highest-risk and difficult to access areas; base protection for poles; and expanding the width of the existing right-of-way.
 - Improving permanent access, response plans and specialized equipment.



Above: Example of an H-frame structure.

Next Steps

- Complete work for the Resiliency Alternative:
 - Wildfire and geotechnical assessments.
 - Environmental overview assessment and an archaeological assessment.
 - Consultation with First Nations, governments and stakeholders.
 - Assess the options.
- Complete a detailed review of the costs for all the alternatives.
- Next round of Public Open Houses anticipated for June 2019.



Identifying a Preferred Alternative

- Our work on the new secondary line alternatives and the Resiliency Alternative will help inform our decision on the preferred alternative.
- We expect the decision timeline will extend to early 2020 at the earliest to ensure all required data has been gathered to support the decision and subsequent application to the BC Utilities Commission.
- Key aspects will include:
 - Safety
 - Environment
 - Cost
 - Socio-economic
 - First Nations
 - Stakeholders
 - Wildfire
 - Geotechnical
- The project in-service date will be updated once a preferred alternative is confirmed.



BC Hydro

Power smart

Appendix C:

Correspondence

Chan, Grace

From: Projects
Sent: 2018, September 14 12:14 PM
To: Projects
Subject: Communication and Consultation Summary Report Now Available

Communication and Consultation Summary Report Now Available

The latest Communications and Consultation Summary report for the West Kelowna Transmission Project is [now available online](#). The report summarizes the project communications and consultation activities from January to July 2018.

For further information on the project you can visit www.bchydro.com/wktp.

If you have any questions, please contact us by email at projects@bchydro.com or toll-free at 1 866 647 3334.

We continue to move forward on this project and I'll keep you updated as more information becomes available.

Thank you,
Sabrina

Sabrina Locicero | Stakeholder Engagement Advisor

BC Hydro
333 Dunsmuir,
Vancouver, BC V6B 5R3

P 1 866 647 3334
E projects@bchydro.com

bchydro.com

Smart about power in all we do.

Chan, Grace

From: Projects
Sent: 2019, March 19 3:51 PM
To: Projects
Subject: West Kelowna Transmission Project Update

West Kelowna Transmission Project Update

I wanted to provide you with an update for the [West Kelowna Transmission Project](#). We've determined that the Project will require additional time in order to complete our due diligence and confirm the preferred alternative.

Taking the time to thoroughly plan our projects is a key component of our project lifecycle process. Since the leading alternative was identified in fall 2016, the cost estimate for the new transmission line is higher than expected. It's prudent that we review this cost estimate in detail and look at all alternatives to continue to deliver clean, reliable electricity to West Kelowna and Peachland.

One additional alternative that we need to examine, as part of our due diligence, is to improve the resiliency of the existing transmission line that serves West Kelowna and Peachland to minimize the risk of outages resulting from forest fires and geotechnical events. We'll begin work on this new alternative in the coming weeks including an environmental overview assessment, engineering studies, and a geotechnical and wildfire assessment for the existing transmission line.

We originally planned to make a decision on the preferred alternative in early 2019. At this time, we expect the decision timeline will extend to early 2020 at the earliest to ensure all required data has been gathered to support the decision and subsequent application to the BC Utilities Commission. Once we make a decision on the preferred alternative, the in-service date will be updated.

By undertaking this additional work, we will ensure a cost-effective solution that will continue to deliver clean, reliable electricity to West Kelowna and Peachland and help keep rates low for our rate payers.

We want to acknowledge the time and effort to date of First Nations, local governments and stakeholders in participating in this project. The information and interests brought forward will be used to inform the analysis of alternatives to meet the needs that triggered this project.

We'll continue to engage with First Nations, local governments and stakeholders to provide regular updates as we move forward. We understand there is significant interest in continuing to make progress on the project timeline. We appreciate your patience and understanding as we complete our due diligence.

If you have any questions or feedback, please contact us at 1 866 647 3334 or projects@bchydro.com, or you can visit www.bchydro.com/wktp.

Sabrina Locicero | Stakeholder Engagement Advisor

BC Hydro
333 Dunsmuir, 15th floor
Vancouver, BC V6B 5R3

P 1 866 647 3334
E projects@bchydro.com

bchydro.com/wktp



Office of the Mayor

2760 Cameron Road, West Kelowna, British Columbia V1Z 2T6

Tel (778) 797.2210 Fax (778) 797.1001

mayorandcouncil@westkelownacity.ca

April 3, 2019

Sabrina Locicero
BC Hydro
P.O. Box 8910
Vancouver, BC V6B 4N1

Dear Ms. Locicero,

At its meeting March 26, 2019 West Kelowna Council discussed the letter from BC Hydro dated March 19, 2019 with an update on the West Kelowna Transmission Project. At this meeting, Council passed the following motion:

THAT Council not support BC Hydro's new line resiliency option as it fails to meet the goal of power supply redundancy and security outlined in BC Hydro's own project literature as a key goal for this project.

BC Hydro's goal was to provide West Kelowna with redundant power supply providing "back up" power and that the West Kelowna area needs a reliable source of power due to the large number of customers on a single transmission line. As well, the existing line is 80 kilometres in length through remote and rugged terrain susceptible to forest fires and landslides. In the summer of 2014, a wildfire in the Smith Creek area exposed the power source of West Kelowna to risk. This one power source distributes power to West Kelowna, Westbank First Nation, Peachland, parts of the Regional District of Central Okanagan and as far south as Summerland. Council of the time requested BC Hydro construct a secondary power line

On February 5, 2015, the Province of BC and BC Hydro announced the West Kelowna Transmission Project. Please see the attached BC Hydro literature explaining the importance of a redundant power supply for our area. Since 2015, studies have taken place with regards to three alternative routes for the transmission project. Last year West Kelowna Council was informed that the earliest in-service date had been moved from 2022 to 2025. Council was disappointed with this delay. On November 27, 2018 BC Hydro made a presentation to West Kelowna Council updating the transmission project progress and confirming the leading alternative, Alternative 2. On December 10, 2018, West Kelowna Council passed a motion in support of this leading option. We were also informed at the November 27th meeting that a decision on the preferred alternative would be made in early 2019. Given this history, with the recent change of scope of the project and with the extension of the decision timeline to early 2020 at the earliest, it feels like we are taking steps back and have lost years of work.

West Kelowna Council requests that BC Hydro will reconsider the change in scope of the project. Redundant power supply is essential to ensuring public safety and to providing West Kelowna residents with a secure power source and support further growth.

Sincerely,

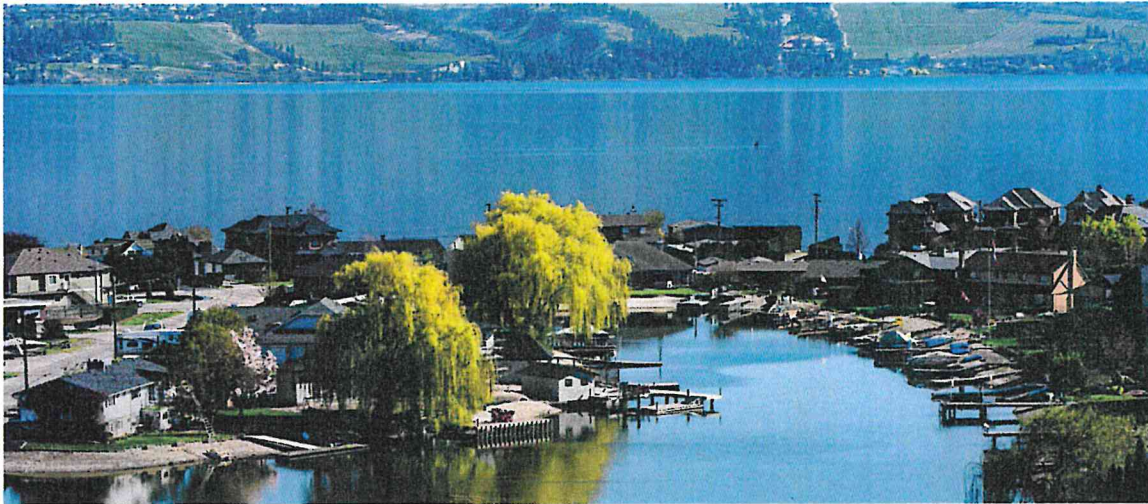
A handwritten signature in blue ink that reads "Gord Milsom". The signature is fluid and cursive, with a long horizontal stroke at the end.

Gord Milsom
Mayor

Cc Honourable John Horgan, Premier of British Columbia
 Honourable Michelle Mungall, Minister of Energy, Mines and Petroleum Resources
 MP Dan Albas
 MLA Ben Stewart
 West Kelowna Council
 Dag Sharman, BC Hydro

Why it's important

Approximately 22,000 customers are served by the Westbank Substation and a single 138 kilovolt transmission line.



We've prioritized the West Kelowna area as needing a redundant supply of power because of:

- The large number of customers served by a single transmission line.
- The challenge of restoring power on the existing transmission line resulting from its 80 kilometre length, remote location and rough terrain.
- The risk of destructive forces like forest fires and landslides.

In the meantime, we'll continue to monitor and manage any risks to the existing transmission line.

What's redundant supply?

Redundant supply means there is more than one source (for example, a transmission line) providing power to the community or "back-up" power. That way, if one source is taken out of service, the other can still supply the community with electricity.



Office of the Mayor
2760 Cameron Road, West Kelowna, British Columbia V1Z 2T6
Tel (778) 797.2210 Fax (778) 797.1001

December 10, 2018

Sabrina Locicero
BC Hydro
P.O. Box 8910
Vancouver, BC V6B 4N1

Dear Ms. Locicero,

Recently, West Kelowna Council was presented with information regarding the proposed routes for the West Kelowna Transmission Project. West Kelowna Council passed the following motion on November 27, 2018:

THAT Council direct the Mayor to write a letter of support to BC Hydro for the leading option (Alternative 2) to the Nicola substation for the West Kelowna Transmission Project.

West Kelowna Council looks forward to hearing the final decision on a preferred alternative in early 2019.

Sincerely,

A handwritten signature in black ink, appearing to read "Gord Milsom".

Gord Milsom
Mayor

Cc: West Kelowna Council



The Corporation of the District of Peachland

5806 Beach Avenue
Peachland, BC
V0H 1X7

Phone: 250-767-2647
Fax: 250-767-3433
www.peachland.ca

April 24, 2019

Sabrina Locicero
BC Hydro
P.O. Box 8910
Vancouver, BC V6B 4N1

Dear Ms. Locicero,

Thank you for attending the April 23rd Committee of the Whole meeting and updating us on the West Kelowna Transmission Line Project. After considering the information in your presentation, Council passed the following motion:

THAT Council does not support BC Hydro's new line resiliency option as it fails to meet the goal of power supply redundancy and security.

It is Council's opinion that resiliency should be done anyway, to minimize the risk of outages resulting from forest fires and geotechnical events, and not just studied. Redundancy should be pursued aggressively.

Approximately 22,000 customers are served by Westbank Substation and a single 138 kilovolt transmission line. One power source distributing power to the City West Kelowna, Westbank First Nation, Peachland, parts of the Regional District Central Okanagan and Summerland.

February 2015, the Province of BC and BC Hydro announced the West Kelowna Transmission Project, emphasising the importance of a redundant power supply for our area. Since then, studies have taken place with respect to three alternative routes for the transmission project. In 2016 BC Hydro identified the leading alternative being Alternative 2 (Nicola substation to Westbank substation) and that the preferred alternative would be decided in 2019. Now the expected decision timeline will extend to 2020 at the earliest.

Council can appreciate the due diligence that is required for a project of this size, however Peachland Council requests that BC Hydro reconsider the change in scope of the project and continue to pursue redundant power supply to ensure public safety and a secure power source for our area.

Yours truly,

Cindy Fortin
Mayor

- c. Honourable John Horgan, Premier of British Columbia
Honourable Michell Mungall, Minister of Energy, Mines and Petroleum Resources

MP Dan Albas
MLA Ben Stewart
Peachland Council
Dag Sharman, BC Hydro

From: projects=bchydro.com@bchydro.com on behalf of BC Hydro Capital Projects <projects@bchydro.com>
Sent: 2019, May 23 2:00 PM
To: Locicero, Sabrina
Subject: BC Hydro open houses this June



Join us in West Kelowna & Peachland

[Read this email online](#)

Open house

West Kelowna Transmission Project & the Westbank Substation Upgrade Project

Come see what we're studying! June 5 & 6, 2019

Join us at one of our upcoming open houses to learn more about the [West Kelowna Transmission Project](#) and the [Westbank Substation Upgrade Project](#).

Drop in anytime between 6 p.m. and 8 p.m. on:

Wednesday, June 5, 2019 – West Kelowna

Westbank Lions Community Centre,
2466 Main St, West Kelowna

Thursday, June 6, 2019 – Peachland

Peachland Community Centre,
4450 6th St, Peachland

Can't make it?

Contact us at [1 866 647 3334](tel:18666473334), email projects@bchydro.com, or visit the [West Kelowna Transmission Project page](#) or the [Westbank Substation Upgrade Project page](#).

West Kelowna Transmission Project: We're planning to strengthen and reinforce the transmission network delivering clean, reliable electricity to West Kelowna and Peachland. The project is part of BC Hydro's capital plan and continues to move forward.

Westbank Substation Project: The Westbank Substation Upgrade Project will ensure we continue to provide clean, reliable energy to the communities of West Kelowna and Peachland. The substation on

increase capacity, replace end-of-life equipment and accommodate a connection for a new transmission line.

Collaboration with the Okanagan Nation and other First Nations is underway. Stakeholder engagement activities with local governments in the project area are ongoing.

bchydro.com

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From: projects=bchydro.com@bchydro.com on behalf of BC Hydro Capital Projects <projects@bchydro.com>
Sent: 2019, June 06 9:00 AM
To: Locicero, Sabrina
Subject: West Kelowna Transmission Line Project update



Fire protection plan, wildfire risk assessment

[Read this email online](#)

Project update

We'd like to provide you with information on the fire protection work planned for this summer for the existing transmission line serving West Kelowna and Peachland. We also want to provide an update on the Wildfire Risk Assessments for the [West Kelowna Transmission Line Project](#).

Fire protection plan for 2019

BC Hydro takes fire protection measures to protect our infrastructure from wildfires. This summer, fire protection work will be undertaken on the existing transmission line running from Nicola Substation to Westbank Substation. This work will include brushing around the base of structures and the application of fire retardants to the bottom section of poles. Once completed, this fire protection work is generally effective for two to three years.

In addition to fire protection measures listed above, we complete regular maintenance work for our infrastructure that includes vegetation maintenance that also helps to protect our infrastructure from wildfires. This work includes mowing along the right-of-way, hazard tree maintenance and the replacement of wood poles and equipment to reduce the probability of pole-top fires.

Wildfire risk assessment

In 2018, a Wildfire Risk Assessment was completed by Bruce Blackwell of B.A. Blackwell and Associates, the same firm that completed the 2016 Wildfire Risk Assessment. The 2018 assessment focused on the wildfire risk for the three study corridors for Alternative 2: Build a new transmission line from Nicola Substation to Westbank Substation using primarily a different route than the existing transmission line. The study also included an assessment of the risk of a wildfire impacting both the existing

[Wildfire Risk Assessment is available online](#) [PDF].

A Wildfire Risk Assessment will be undertaken for the existing transmission line running from Nicola Substation to Westbank Substation this summer. We will share the results of this assessment with you once they are available.

Thank you for your continued engagement on the project. If you have any questions or feedback, please contact projects@bchydro.com or **1 866 647 3334**.

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Appendix D:

December 2018 Project Newsletter Update

Chan, Grace

From: Projects
Sent: 2018, December 03 4:14 PM
To: Projects
Subject: West Kelowna Transmission Project - Fall Newsletter

Fall 2018 West Kelowna Transmission Project Newsletter

Below please find a link to the fall 2018 West Kelowna Transmission Project newsletter.

- [Fall 2018 West Kelowna Transmission Project newsletter.](#)

The newsletter includes an updated alternatives assessment as we prepare to make a decision on the preferred alternative in early 2019. It also identifies a change in the project in-service date. The new date takes into account the time needed for regulatory permits, approvals and authorizations, and complete field studies and construction. The schedule will continue to be updated as the project progresses.

Questions? Contact us at 1 866 647 3334 or projects@bchydro.com, or visit www.bchydro.com/wktp .

Sabrina Locicero | Stakeholder Engagement Advisor

BC Hydro

333 Dunsmuir,
Vancouver, BC V6B 5R3

P 1 866 647 3334

E projects@bchydro.com

bchydro.com

Smart about power in all we do.

West Kelowna Transmission Project Update

Fall 2018

On February 5, 2015, the Province of British Columbia and BC Hydro announced the West Kelowna Transmission Project to build a new, secondary transmission line to West Kelowna and Peachland. The existing line into the area has provided reliable power to the communities for decades. The new line will strengthen and reinforce the existing transmission network.

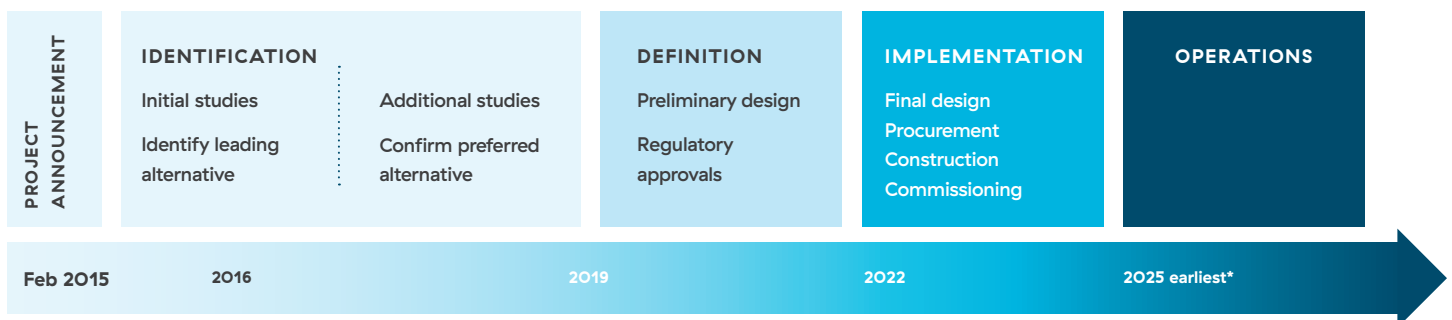
Project at-a-glance

- Spring 2015 to fall 2016, studied three alternatives.
- In fall 2016, Alternative 2: to Nicola Substation was identified as the leading alternative for this project. This alternative involves building a new transmission line from Nicola Substation to Westbank Substation.
- Additional review of Alternative 3: to FortisBC is being undertaken in order to confirm our assessment.
- No plans to continue to study Alternative 1: to Vernon Terminal Substation as it poses the highest level of risk compared to the other alternatives.
- A decision on the preferred alternative is expected to be made in early 2019.

What's new

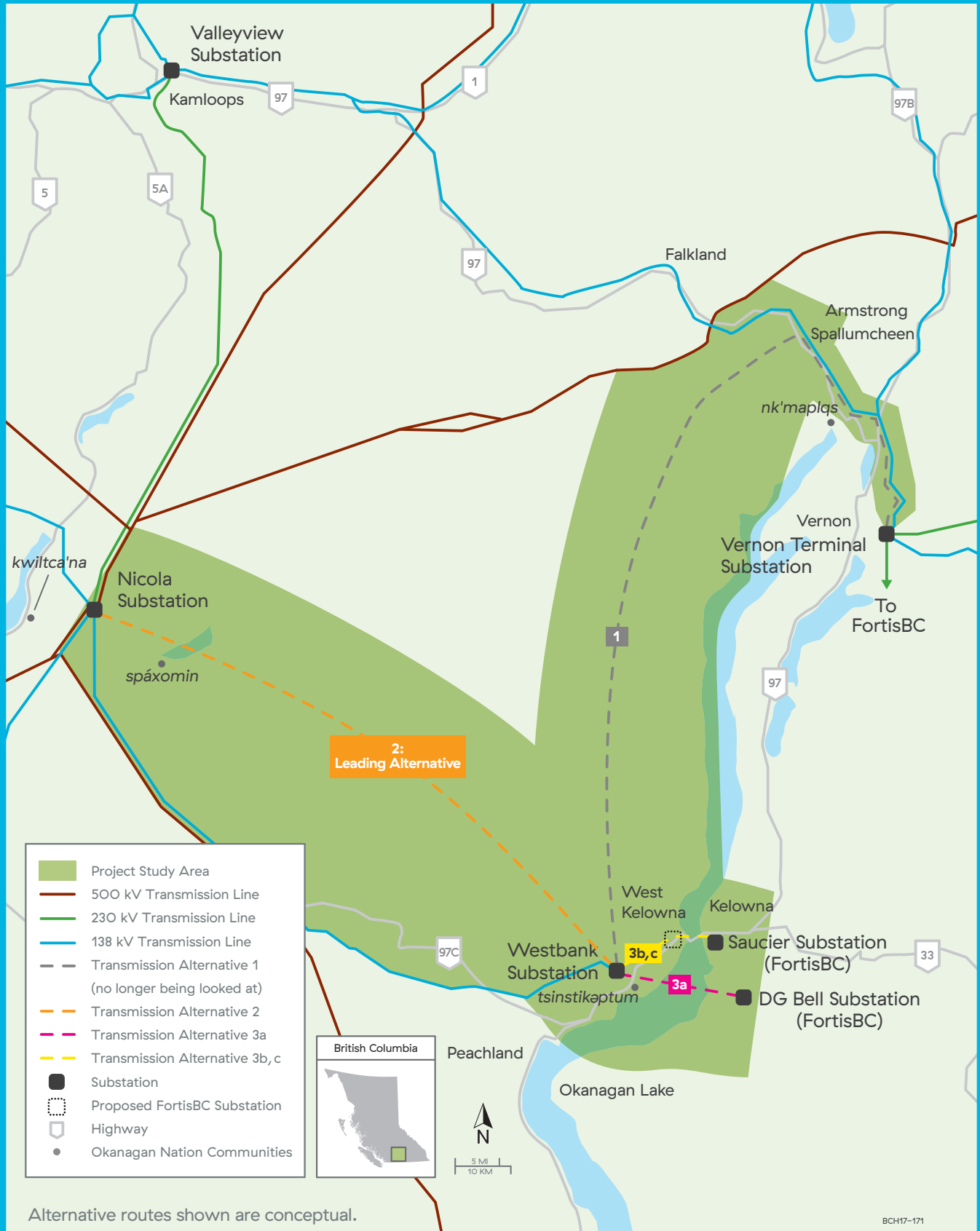
PROJECT TIMELINE

The project timeline has been updated. The earliest target in-service date (ISD) has moved to 2025 from 2022. This change to the ISD takes into account the time required to acquire regulatory permits, approvals and authorizations, and the short season available to complete field studies and construction. The schedule will continue to be updated as the project progresses.



*Construction will not commence until the project is approved by the BC Utilities Commission and a final investment decision is supported by BC Hydro's Board of Directors

West Kelowna Transmission Project



Alternative routes shown are conceptual.

BCH17-171

Leading alternative, Alternative 2: to Nicola Substation

PRELIMINARY STUDY CORRIDORS

We are assessing the area and have identified three preliminary study corridors based on the following information:

- Environmental and archaeological studies
- Wildfire risk and terrain
- Road access and land ownership
- Consultation feedback
- Technical standards and best practice
- Input from BC Hydro engineering, operations and maintenance staff

Studies completed in 2017 and 2018 along with consultation with First Nations, the public and government will be used to assess the corridors.

We expect to make a decision on the preferred alternative and preferred corridor in early 2019. The selected corridor will be refined over the next few years.

If you'd like to provide us with your feedback prior to our decision on the preferred alternative or corridor, please forward your comments to projects@bchydro.com.



Work currently underway

Since June 2017 we have undertaken additional studies for Alternative 2: geotechnical, wildfire, environmental, socio-economic, archaeological, traditional use and engineering.



Cultural plant knowledge holder with Trapper's Tea. Part of the studies underway in this phase include terrestrial wildlife and vegetation studies. These studies work to identify and evaluate potential effects on terrestrial wildlife resources, vegetation resources, species-at-risk, and sensitive ecosystems associated with construction and operation activities.



Wetland featuring aquatic vegetation. Part of the studies underway in this phase include fisheries and aquatic habitat studies. These studies work to identify and evaluate potential effects on fish populations, instream and riparian habitat, fish passage and water quality associated with construction and operation activities.

For more information on all our studies underway, please go to bchydro.com/wktp.



Field work, summer 2017

These studies will inform our decision making process and help our project planning including line routing and access plans.

We're also completing a review of Alternative 3: to FortisBC to confirm our assessment. This alternative includes three options to build a new transmission line, including a submarine cable across Okanagan Lake, connecting Westbank Substation to the FortisBC system on the east side of Okanagan Lake.

Stakeholder engagement and First Nations consultation continues. We're collaborating with the Okanagan Nation Alliance and member communities as well as other First Nations to understand and address their interests throughout the life of the project.

We expect to make a decision on our preferred alternative for the transmission project in early 2019.

Updated alternatives assessment

We've updated the alternatives assessment in preparation for the decision on the preferred alternative in early 2019.

This assessment was developed based on the results of studies completed to date. First Nations consultation and stakeholder engagement will be updated at the end of 2018. It includes all alternatives, however, please note that Alternative 1 is no longer being studied.

To help you see how each of the alternatives stack up against each other, we've colour-coded some of the considerations.

Assessment criteria	Alternative 1	Alternative 2 Leading alternative	Alternative 3a	Alternative 3b	Alternative 3c
Safety	●	●	●	●	●
Environment	●	●	●	●	●
Cost	●	●	●	●	●
Socio-economic	●	●	●	●	●
First Nations*	●	●	●	●	●
Stakeholders*	●	●	●	●	●
Reliability**	●	●	●	●	●

* First Nations and stakeholders assessments are from 2016. They will be updated at the end of 2018.

** Reliability includes Wildfire Risk and Geotechnical Risk as well as other factors.

● High risk ● Moderate risk ● Low risk

Alternatives assessment descriptions

Alternative 1: To Vernon Terminal Substation

BUILD A NEW TRANSMISSION LINE ON THE WEST SIDE OF OKANAGAN LAKE, CONNECTING WESTBANK SUBSTATION TO THE VERNON TERMINAL SUBSTATION.

Safety—high risk ●

This alternative has high overall potential safety risk because of challenging terrain and access for our workers. It's expected that this alternative would require the most helicopter access, the highest level of clearing and the most access road construction, all of which increase hazards for our workers.

Environment—high risk ●

This alternative has high overall potential environmental risk. This alternative has the largest environmental footprint, as the potential line length is the longest. A leading factor for increased environmental risk on this alternative is the poor geotechnical conditions, for example the steep slopes and loose soil conditions found in this area, which could result in erosion. This alternative would pose a high level of risk to wildlife and fisheries, due to the sensitive areas associated with this alternative, such as Fintry Park and the numerous stream crossings.

Cost—high risk ●

It's anticipated that this alternative would have a high cost compared to Alternative 2, due to the line length, difficult terrain and construction methods.

Socio-economic—high risk ●

This alternative has high potential socio-economic risk. New rights-of-way would be required in developed and urbanized areas in West Kelowna and Vernon, with a high potential for visual impacts and impacts on private property.

First Nations—high risk ●

Not supported.

Stakeholders—high risk ●

Not supported.

Reliability—high risk ●

This alternative has high overall potential reliability risk, due to the long line length, difficult terrain, and high wildfire risk.

Alternative 2: To Nicola Substation (leading alternative)

BUILD A NEW TRANSMISSION LINE FROM NICOLA SUBSTATION TO WESTBANK SUBSTATION USING A DIFFERENT ROUTE THAN THE EXISTING TRANSMISSION LINE.

Safety—low risk ●

This alternative has low overall potential safety risk including low potential safety risks for our workers because of existing access roads and large sections of non-mountainous terrain. It's expected that this alternative could require a small amount of helicopter access and a moderate amount of clearing.

Environment—moderate risk ●

This alternative has moderate overall potential environmental risk. This alternative has a moderate environmental footprint; the potential line length is the second longest. Potential impacts of this alternative to fisheries and wildlife are expected to be low if mitigated through thoughtful routing and design. This alternative also has relatively low geotechnical risks.

Cost—low risk ●

It's anticipated that this alternative would have the lowest cost of all alternatives, due to construction methods and the type of infrastructure being built.

Socio-economic—moderate risk ●

This alternative has moderate potential socio-economic risk. New rights-of-way would be required. This alternative is the least developed and urbanized, with a large amount of rural and Crown land and the potential to partially use existing rights-of-way.

First Nations—low risk ●

Generally supported. Okanagan Nation Alliance (ONA) have expressed support for Alternative 2 as the preferred alternative.

Stakeholders—low risk ●

Generally supported.

Reliability—moderate risk ●

This alternative has moderate overall potential reliability risk due to the line length and having the second lowest wildfire risk.



Alternative 3: To FortisBC

BUILD A NEW TRANSMISSION LINE, INCLUDING A SUBMARINE CABLE ACROSS OKANAGAN LAKE, CONNECTING WESTBANK SUBSTATION TO THE FORTISBC SYSTEM.

We're also completing a review of Alternative 3: to FortisBC to confirm our assessment. Ministry of Transportation and Infrastructure (MOTI) has provided feedback that they will not consider the option of installing a transmission line on or near the William R. Bennett Bridge because other options are available. MOTI has also expressed concern with allowing the new transmission line in their Highway 97 right-of-way and strongly encourages BC Hydro to consider an alternative alignment. The City of Kelowna has indicated that they oppose any overhead infrastructure within City boundaries or to the south of the City and east of Okanagan Lake. A greater portion of the new transmission line is expected to be constructed underground rather than overhead as previously expected. The new substation in West Kelowna (option 3b) will require underground distribution lines to connect to the existing BC Hydro distribution system.

We have explored three options for Alternative 3:

- 3a: Connecting Westbank Substation to DG Bell Substation in the FortisBC system.
- 3b: FortisBC building a new substation in West Kelowna and a transmission line crossing Okanagan Lake to Saucier Substation (part of the FortisBC system in Kelowna). We would then build a transmission line from Westbank Substation to the new FortisBC substation.
- 3c: Option 3c is similar to 3b except it proposes no new substation in West Kelowna.

Safety—low risk ●

This alternative has low overall potential safety risk. There are low potential safety risks for our workers because of the relatively short transmission line or cable length. This alternative will require a submarine cable in Okanagan Lake.

Environment—moderate risk ●

This alternative has moderate overall potential environmental risk. This alternative has the smallest environmental footprint having the shortest potential line length. It also includes a submarine cable in Okanagan Lake, creating a moderate potential impact to fish and fisheries habitat.

Cost—high risk ●

- 3a and 3c: It's anticipated that these options would have a high cost compared to Alternative 2, due to the requirement of a submarine cable and undergrounding the transmission line.
- 3b: It's anticipated that this option would have a high cost compared to Alternative 2, due to the requirement of a new substation, a submarine cable and undergrounding the transmission line.

Socio-economic—low risk ●

This alternative has low potential socio-economic risk. New rights-of-way would be required in developed and urbanized areas in West Kelowna and Kelowna, with a low potential for visual impacts and impacts on private property as a result of undergrounding the transmission line.

First Nations—moderate risk ●

Not fully supported.

Stakeholders—low risk ●

Generally supported.

Reliability—moderate risk ●

This alternative has moderate overall potential reliability risk. The wildfire risk is anticipated to be low risk. If an outage were to occur, the repair time for the submarine cable in Okanagan Lake or the underground transmission line would be longer than the repair time for an overhead transmission line.

Westbank Substation Project

We're planning to upgrade the existing Westbank Substation to increase capacity, replace end-of-life assets and ensure we can connect a new transmission line planned as part of the West Kelowna Transmission Project. See bchydro.com/westbanksub for more information on the Westbank Substation Project.

For more information

Please visit our web page for additional information on the project including the latest Communications and Consultation Summary (January 2018–July 2018) and storyboards from our open houses in May 2018.

Visit: bchydro.com/wktp
Email: projects@bchydro.com
Call: 1 866 647 3334

Your feedback is important to us

We expect to make a decision on the preferred alternative in early 2019. If you'd like to provide us with your feedback prior to our decision, please forward your comments to projects@bchydro.com.