



West Kelowna Transmission Project

Stakeholder Communication and Consultation Summary

NOVEMBER 2016—DECEMBER 2017

FEBRUARY 2018

BCH17-925

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Introduction

The Stakeholder Communication and Consultation Summary, November 2016 – November 2017 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 November 2016, we identified Alternative 2 as the leading alternative. For this announcement, BC Hydro informed all stakeholders, levels of governments and First Nations of the decision, the criteria used to identify the leading alternative and the next steps for the project. This was done through letters, email and website updates, formal correspondence, delegations to municipal councils, in-person meetings and presentations.

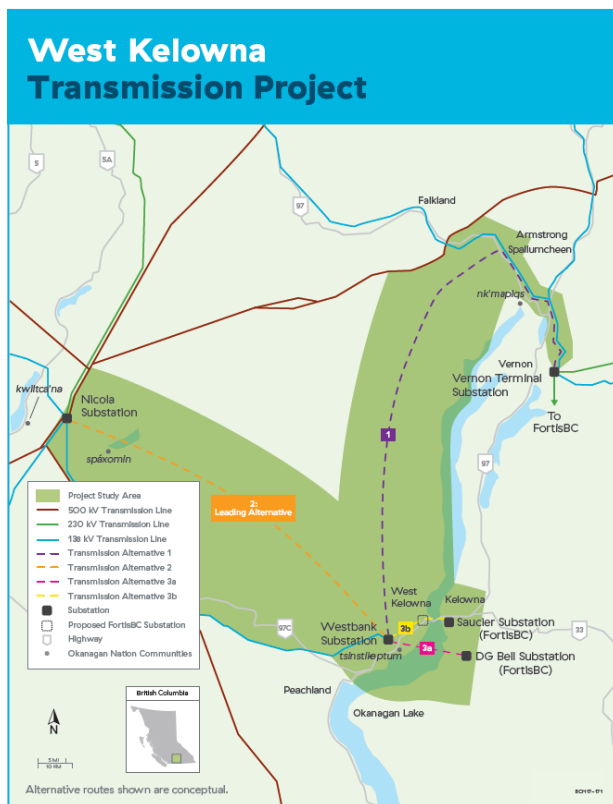
As of November 2017, the team will continue to study Alternative 2 to confirm the preferred alternative. The project team will take any input received from First Nations, the public and other stakeholders into consideration to confirm the preferred alternative anticipated in 2018.

Overview

Project background

We're in the early planning stage for a new, secondary transmission line delivering clean, reliable power to the communities of West Kelowna and Peachland. The existing line into the area has provided reliable power to the communities for decades. A new transmission line will provide a second source of power for the area, also called redundancy.

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, BC Hydro identified Alternative 2: to Nicola Substation as the leading alternative. During the next stage of the project, we will undertake detailed environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2 as the leading alternative. An additional review of Alternative 3: to FortisBC is being undertaken to confirm our assessment. There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic and cost risk. At the end of this process we will make a decision on our preferred alternative. This is expected to take place in 2018.

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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 found online at bchydro.com/energy-in-bc/projects/wktp/info-centre.

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 found online at bchydro.com/energy-in-bc/projects/wktp/info-centre.

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 found online at <https://www.bchydro.com/energy-in-bc/projects/wktp/info-centre.html>.

In the fourth round of consultation, from November 2016 – November 2017, we shared our completed assessment of the three alternatives, identified Alternative 2 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.

Consultation and communication will continue during the next stage of the project, with a focus on the leading alternative, and an additional review of Alternative 3.

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 373 contacts on the West Kelowna Transmission Project stakeholder list, of which 267 include an email address.

In November 2016, this stakeholder list was used to announce the identification of the leading alternative. Announcement letters were sent to mayors, councils and/or senior municipal staff, current MPs and MLAs in the project area. Email notification was also sent to all recipients identified on the West Kelowna Transmission Project stakeholder list (see Appendix A).

In May 2017, we identified private property owners and Crown land tenure holders in the preliminary study area for Alternative 2. Notification letters were sent to both groups providing an overview of the project, identifying recipients as being within the study area and informing them that field studies will start mid-June 2017 (see Appendix C).

In October 2017, the public was invited to participate in the fourth round of public open houses in Peachland (November 7), West Kelowna (November 8) and Kelowna (November 9) through the following:

A postcard sent by postal mail.

- A double-sided 5" X 7" postcard was sent by unaddressed mail to over 51,000 homes and businesses within the project study areas for Alternatives 2 and 3. The postcard explained the project, invited the public to attend an open house and included contact information.
- This method of notification was successful in increasing participation. The second and third rounds of public consultation were attended by at least twice as many participants compared to the first round, where notification relied solely on advertising. In addition, using a postcard ensured significant effort had been made to ensure the majority of stakeholders within the project area were aware of the project and opportunities for consultation.

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

- castanet.com
- Power 104 FM
- SUN 99.9FM Kelowna
- SUN FM 105.7 Peachland
- SILK FM
- CBC Radio South
- Peachland View
- Westside Weekly

West Kelowna Transmission Project

- Kelowna Capital News
- Kelowna Courier

Social media notifications inviting the public to attend an open house via the BC Hydro Twitter and Facebook accounts.

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

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

- Two rounds of emails (October 27 and November 6, 2017) were sent to the stakeholder email list inviting them to attend one of the three open houses or to contact us by phone or email for more information.
- At the time of the email notification, there were 267 email addresses on the stakeholder email list.

Information packages delivered to community centres, libraries and City Halls within the project study areas.

- Prior to the November 2017 open houses, packages including the project postcard with details of the upcoming consultation were hand-delivered or mailed to 23 locations, with the request they be displayed.

Project website: www.bchydro.com/wktp

- Updated with the details of consultation opportunities (in-person at open houses and online).

A copy of the open house online advertisement and postcard are included in Appendix E.

Open houses

The fourth round of West Kelowna Transmission Project open houses was held in November 2017. 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 three communities within the project study areas:

Community	Date and time	Location
Peachland	November 7, 2017 5:00pm to 8:00pm	Peachland Community Centre 4450 6th Street, Peachland, B.C.
West Kelowna	November 8, 2017 5:00pm to 8:00pm	Westbank Lions Community Centre 2466 Main St, West Kelowna, B.C.

Community	Date and time	Location
Kelowna	November 9, 2017 5:00pm to 8:00pm	Coast Capri Hotel 1171 Harvey Ave, Kelowna, B.C.

The fourth round of public open houses was intended to inform stakeholders of the latest information on the studies being undertaken for the leading alternative, Alternative 2: to Nicola Substation. An update was also provided on the additional review of Alternative 3: to FortisBC, underway to confirm our assessment. The preferred alternative is expected to be confirmed in 2018.

We displayed a set of 18 storyboards at each of the open houses with text, graphics and maps (see Appendix E). A four-page project update was available for attendees (see Appendix E). The project update included similar information to the storyboards, and could be taken home by open house attendees.

Both the open house storyboards and project update 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 aboriginal relations leads, were at the open houses to answer questions and hear comments. Feedback forms were also available to participants.

Westside Daze

Westside Daze is a multi-day community event on Canada Day long weekend in West Kelowna. The BC Hydro Community Team participated in this important community event on July 1, 2017. As part of this participation, the Community Team was prepared to answer questions and provide informal handouts on the West Kelowna Transmission Project.

The Community Team engaged several residents on the Project while at the Westside Daze event including the mayor of West Kelowna and two council members. Conversations were positive, and expressed appreciation for and importance of BC Hydro's extensive consultation work for the project.

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 four main sections:

1. Why it's important
2. What's happening
3. Consultation
4. Information centre

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From November 2016 to November 2017, these pages have been updated to ensure all stakeholders can access project updates, next steps and project files on a regular basis. This includes information related to the announcement of Alternative 2 as the leading alternative and information on the project's next steps.

Local government meetings

Between November 2016 and November 2017, we met with senior staff and/or elected officials of local governments, to provide project updates. These meetings included delegations to municipal councils and meetings with senior staff to review the identification of the leading alternative, outline next steps and request input (see Appendix B).

These meetings built upon initial meetings held in 2015 and in 2016. To date, we've had a total of 31 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	September 27, 2017 September 5, 2017 July 20, 2017 February 6, 2017 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	September 5, 2017 January 10, 2017 November 8, 2016 June 14, 2016 November 26, 2015 March 25, 2015

Local government	Meeting date
Township of Spallumcheen	June 6, 2016 June 4, 2015
Columbia-Shuswap Regional District	August 18, 2016
Thompson-Nicola Regional District	July 14, 2016

Feedback

Feedback from stakeholders

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

We received five emails in response to the announcement of the leading alternative. Responses included:

- A request to be added to the project stakeholder list.
- A question about line location in Spallumcheen.
- A request for more information on the metrics used to identify the leading alternative.
- An expression of opinion that the project process was a waste of time and money.
- A request to continue to receive project information.

We received less than 10 emails regarding the overall project:

- One asked for further detail and rationale regarding the options considered.
- One discussed the North American Electric Reliability Corporation (NERC) standards for the existing transmission line.
- One request for a detailed map of the Alternative 2 study corridors.
- One email requesting information about the Westbank Substation
- Two requests to be removed from the distribution list for project updates
- One question about impacts to local lakes
- One statement of support for Alternative 2
- One email requesting to be added to the distribution list for project updates

We received one phone call asking about the transmission line location for the leading alternative near Glenrosa in West Kelowna.

We received 13 feedback forms at the open houses. Feedback included:

- Request for more information on routing.
- Request for more information on the study results.
- Request for more information on construction milestones.
- Support for the project from Peachland and West Kelowna.

West Kelowna Transmission Project

Feedback from local government

We received written feedback from the City of Kelowna (a copy of the letter can be found in Appendix D).

City of Kelowna

Following a February 6 meeting with staff from the City of Kelowna to review next steps for Alternative 3 with options, BC Hydro received a letter from the City, dated April 7, 2017. The letter stated:

“The City of Kelowna cannot support overhead infrastructure that may negatively affect the City’s urban environment or parkland.”

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 the next stage of the project, we’ll conduct detailed studies for Alternative 2. An additional review of Alternative 3: to FortisBC is being undertaken to confirm our assessment.

There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, wildfire and geotechnical risk compared to the other alternatives.

At the end of this process we will make a decision on our preferred alternative, expected to be made in 2018.

The next round of Public Open Houses is anticipated for spring 2018.

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: stakeholderengagement@bchydro.com
- Website: www.bchydro.com/wktp

Appendix A:

Announcement of the Leading Alternative

Sabrina Locicero
Stakeholder Engagement, BC Hydro
Email: sabrina.locicero@bchydro.com
Office: 604 623 3517

November 14, 2016

Re: West Kelowna Transmission Project: Identification of the Leading Alternative

Over the last year-and-a-half, we've been studying three alternatives (see map on page 3) for a new, secondary transmission line so we can continue delivering clean, reliable power to the growing communities of West Kelowna and Peachland.

BC Hydro has identified Alternative 2: to Nicola Substation as the leading alternative. This alternative involves building a new transmission line from Nicola Substation to Westbank Substation using a different route than the existing transmission line.

We chose this alternative for the following reasons:

- It's been assessed as more favourable than Alternatives 1: to Vernon Terminal Substation and 3: to FortisBC System from an overall safety, environmental, socio-economic and cost perspective;
- It poses low geotechnical risk which can be reduced by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time; and,
- It has the second lowest fire risk which can also be reduced by the use of steel poles, routing, design, adequate separation from the existing line and vegetation management. In addition, there is no record of a wildfire in British Columbia with a diameter larger than 20 km. Given the study area for Alternative 2 is 50 km wide, there is space to ensure adequate separation of the existing and new transmission line. Also, Nicola Substation is a major substation built with redundancy and additional fire protection.

Since February 2015, our work on all three alternatives has included area planning and desktop studies, wildfire risk and geotechnical risk assessments, as well as ongoing First Nations consultation, stakeholder engagement and discussions with all levels of government.

During the next stage of the project we will undertake detailed environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2 as the leading alternative. Some studies will also be completed for Alternative 3 in order to confirm our assessments.

There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic and cost risk. At the end of this process we will make a decision on our preferred alternative, expected to be made in 2017.

We will continue working with First Nations and engaging with our stakeholders throughout the planning and implementation of the project.

As we move ahead with the next stage of the proposed project, please feel free to contact me directly if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read 'Sabrina Locicero', with a stylized, cursive script.

Sabrina Locicero
BC Hydro Stakeholder Engagement
West Kelowna Transmission Project

CC: Sue Foster, BC Hydro Project Manager, West Kelowna Transmission Project
Dag Sharman, BC Hydro Community Relations Manager

West Kelowna Transmission Project



FileMessageDeveloper

Ignore

Delete

Reply

Reply All

Forward

IM

More

Meeting

Move

Rules

OneNote

Actions

Mark Unread

Categorize

Follow Up

Translate

Find

Related

Select

Zoom

Zoom

From: ☐ Stakeholder Engagement

To:

Cc:

Subject: West Kelowna Transmission Project: Identification of a Leading Alternative

Sent: Mon 2016-11-14 3:04 PM

Hello,

Below is an update on the [West Kelowna Transmission Project](#) and the identification of a leading alternative.

Over the last year-and-a-half, we've been studying three alternatives ([click to see map](#)) for a new, secondary transmission line so we can continue delivering clean, reliable power to the growing communities of West Kelowna and Peachland.

BC Hydro has identified Alternative 2: to Nicola Substation as the leading alternative. This alternative involves building a new transmission line from Nicola Substation to Westbank Substation using a different route than the existing transmission line.

We chose this alternative for the following reasons:

- It's been assessed as more favourable than Alternatives 1: to Vernon Terminal Substation and 3: to FortisBC System from an overall safety, environmental, socio-economic and cost perspective;
- It poses low geotechnical risk which can be reduced by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time; and
- It has the second lowest fire risk which can be reduced by the use of steel poles, routing, design, adequate separation from the existing line and vegetation management. In addition, there is no record of a wildfire in British Columbia with a diameter larger than 20 km. Given the study area for Alternative 2 is 50 km wide, there is space to ensure adequate separation of the existing and new transmission line. Also, Nicola Substation is a major substation built with redundancy and additional fire protection.

Since February 2015, our work on all three alternatives has included area planning and desktop studies, wildfire risk and geotechnical risk assessments, as well as ongoing First Nations consultation, stakeholder engagement and discussions with all levels of government.

During the next stage of the project we will undertake detailed environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2. Some studies will also be completed for Alternative 3 in order to confirm our assessments.

There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic and cost risk. At the end of this process we will make a decision on our preferred alternative, expected to be made in 2017.

We will continue working with First Nations and engaging with our stakeholders throughout the planning and implementation of the project. For more information on the West Kelowna Transmission Project, please visit www.bchydro.com/wktp. You can also contact:

Stakeholder Engagement, BC Hydro
1 866 647 3334
stakeholderengagement@bchydro.com

Sabrina Locicero | Stakeholder Engagement Advisor

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

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bchydro.com

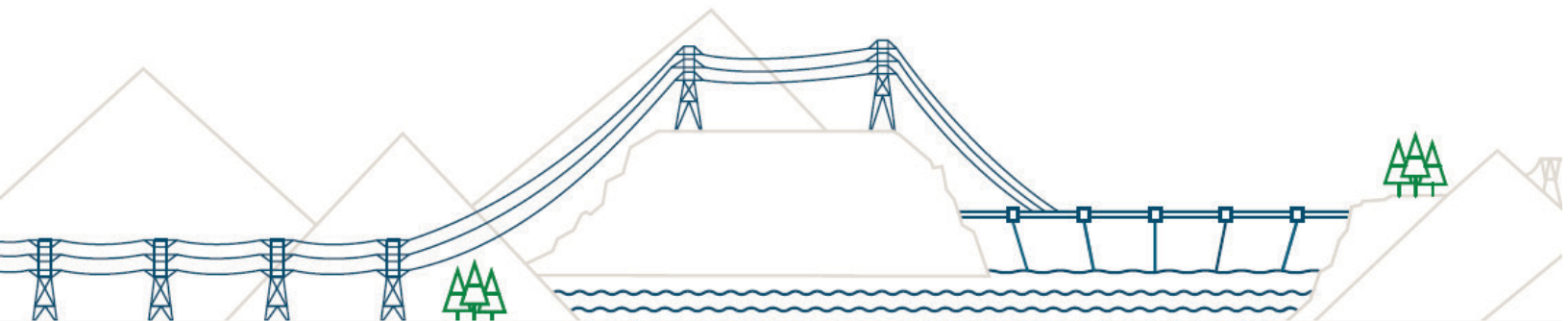
Smart about power in all we do.

Appendix B:

Presentations to local governments

West Kelowna Transmission Project

Project Update

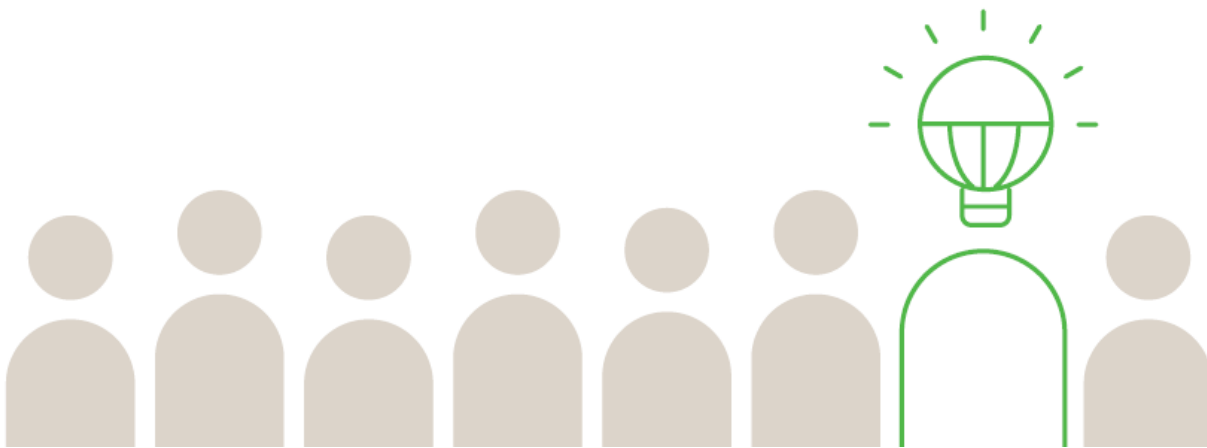


October 23, 2017

 **BC Hydro**
Power smart

Agenda

- Project Overview
- Review of Alternative 2, Leading Alternative
- Leading Alternative, Preliminary Study Corridors
- Leading Alternative, Preliminary Studies
- Review Alternative 3
- Identifying a Preferred Alternative
- Project Timeline



Project overview

- Planning for a new, secondary transmission line to strengthen the transmission network delivering clean, reliable electricity to the communities of West Kelowna and Peachland.
- The new line will strengthen and reinforce the existing transmission network.



Project overview

- Spring 2015 to fall 2016, studied three alternatives.
- Last fall, Alternative 2: to Nicola Substation was identified as the leading alternative and will be further studied.
- 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 levels of risk compared to the other alternatives.
- A decision on the preferred alternative is expected to be made in 2018.



Leading Alternative

Why Alternative 2: To Nicola Substation was identified as the leading alternative

- Alternative 2 is more favourable than alternatives 1 and 3 from an overall safety, environmental, socio-economic and cost assessment.
- Alternative 2 poses low geotechnical risk which can be mitigated by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time.
- Alternative 2 has the second lowest fire risk which may be mitigated by use of steel poles, routing, design, adequate separation from the existing line and vegetation management. Nicola Substation is a 500kV station built with redundancy and additional fire protection.
- **Both Alternative 2 and 3 will continue to be studied in the next stage of the project to confirm the preferred alternative.**

Leading Alternative (Alternative 2)

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 an area survey by air and geotechnical investigations on the ground.
- Completing a field wildfire risk assessment.
- Selecting transmission line structure type, conductor size, configuration and substation layout requirements.
- Beginning to look at routing options.



Leading Alternative (Alternative 2)

Preliminary Study Corridors

- Studies and findings from the work done to date helped us develop three preliminary study corridors. We used the following information:
 - Environmental Overview Assessment,
 - Geotechnical and Wildfire Fire Risk Assessment,
 - Consultation feedback,
 - Existing mapping information about the area between Nicola and Westbank substations, e.g. access roads, terrain, usage, and,
 - Technical standards and best practice.
- The preliminary study corridor will continue to be refined over the next couple of years.

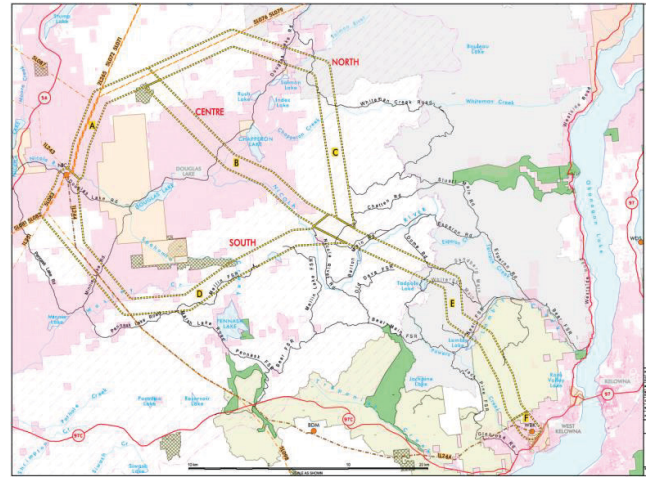
Three Preliminary Study Corridors



Leading Alternative (Alternative 2)

South Corridor Studies

- BC Hydro is undertaking a desktop and field study program for Alternative 2 on the South preliminary study corridor, starting in June 2017 and running through 2018.
- The study program includes a number of environmental, socio-economic, archaeological, traditional use and engineering studies.
- These studies will inform our project planning including line routing and access plans.
- The study area includes both the Okanagan and Nicola watersheds.



DRAFT MAP FOR STUDY AND DISCUSSION.



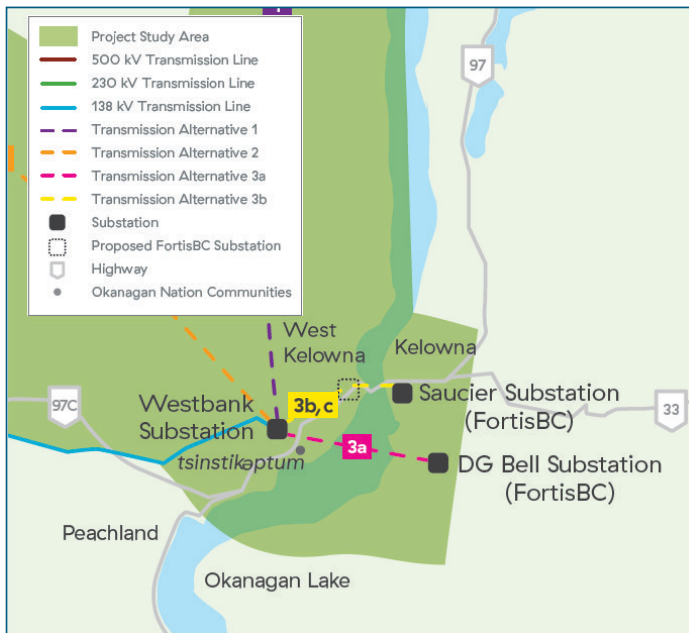
Leading Alternative (Alternative 2)

Wildfire Risk Assessment

- The Wildfire Risk Assessment will be updated to cover the Preliminary Study Corridors, to include:
 - A comparison of the wildfire risk for each study corridor.
 - Study of the risk of simultaneous outage to existing line and a line in each of the study corridors.
 - A review of the finding of occurrence of wildfires with a diameter larger than 20 km based on the lessons learned from the 2017 wildfire season.
 - Recommendations on the mitigation required for each of the study corridors.

Alternative 3: to FortisBC

In this stage, we are:



- Continuing to study Alternative 3 to confirm our assessment.
- Option 3c is similar to 3b except it proposes no new substation in West Kelowna.
- Looking at:
 - Whether a cable can be placed on the bridge
 - Potential transmission routing options and overhead versus undergrounding required
 - Distribution system requirements from the new substation in West Kelowna (option 3b)
 - Clarifying power flow studies carried out by FortisBC
- MOTI has provided feedback that they will not consider the option of installing a transmission line on or near the WR Bennett Bridge because other options are available. They have also expressed concern with allowing the new transmission line in their highway 97 right-of-way strongly encourage 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.

Identifying a Preferred Alternative

Structured decision making

- We expect to make a decision on our preferred alternative in 2018.
- Desktop and field studies, First Nations consultation and stakeholder engagement will inform our decision making process.

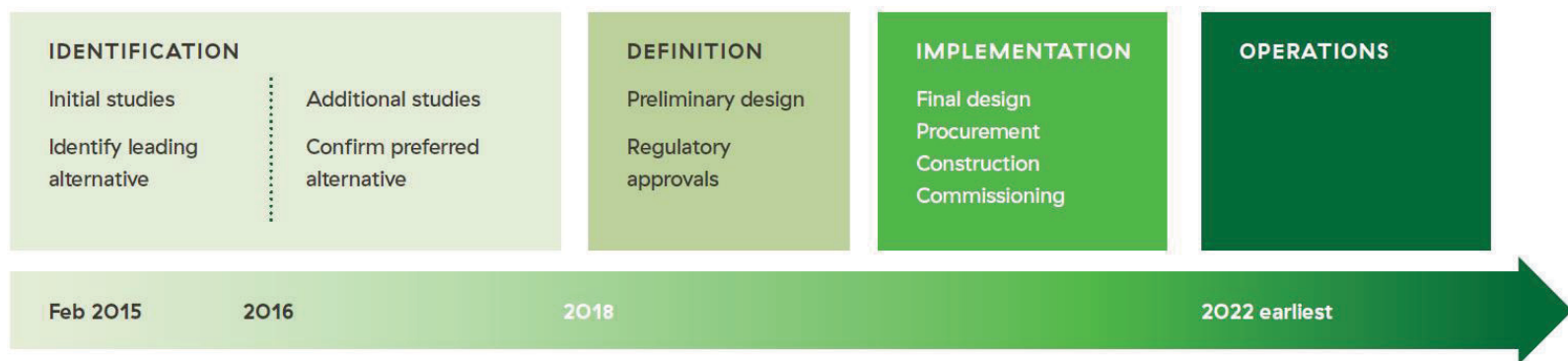
Key aspects will include:

- Safety
- Environment
- Cost
- Socio-economic
- First Nations and stakeholders
- Wildfire
- Geotechnical



Project timeline

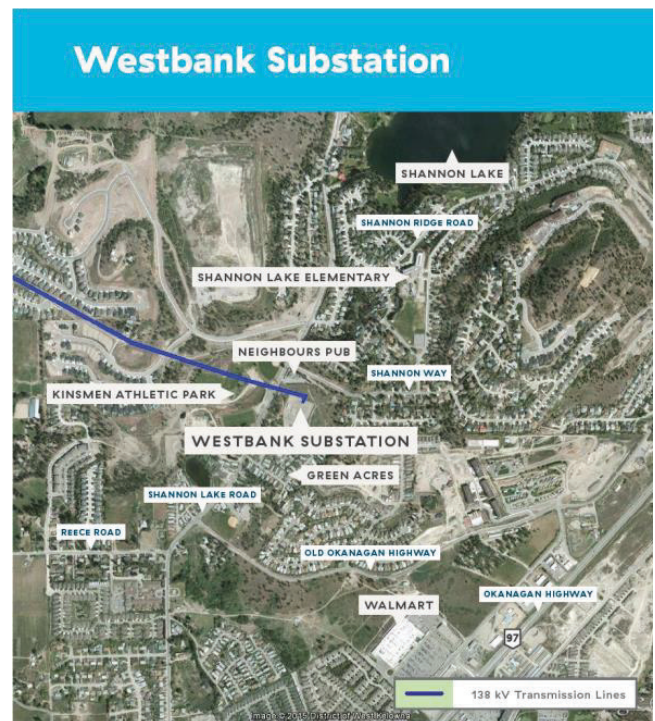
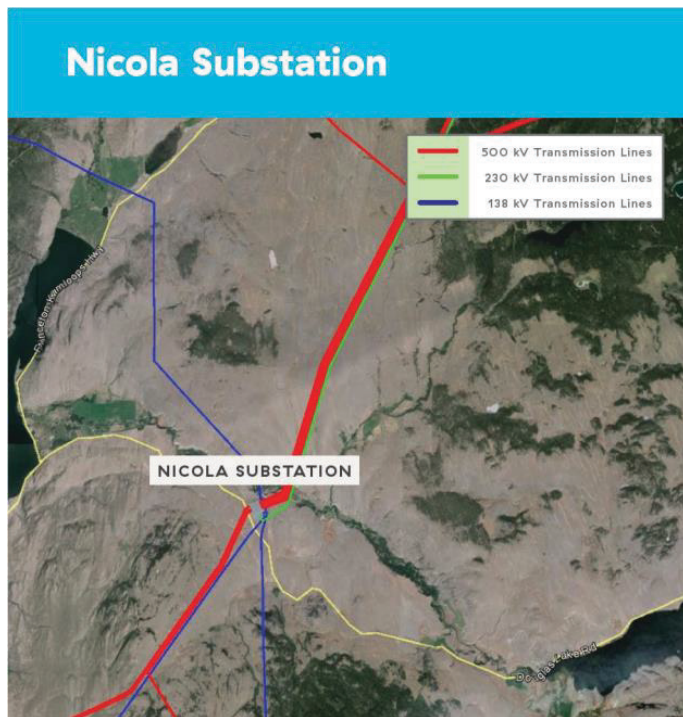
- Conduct desktop and field studies for Alternative 2.
- A review of Alternative 3 is being undertaken in order to confirm our assessments.
- No plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, wildfire and geotechnical risk compared to the other alternatives.
- At the end of this process we expect to make a decision on our preferred alternative in 2018.
- Next round of Public Open Houses anticipated for fall 2017.





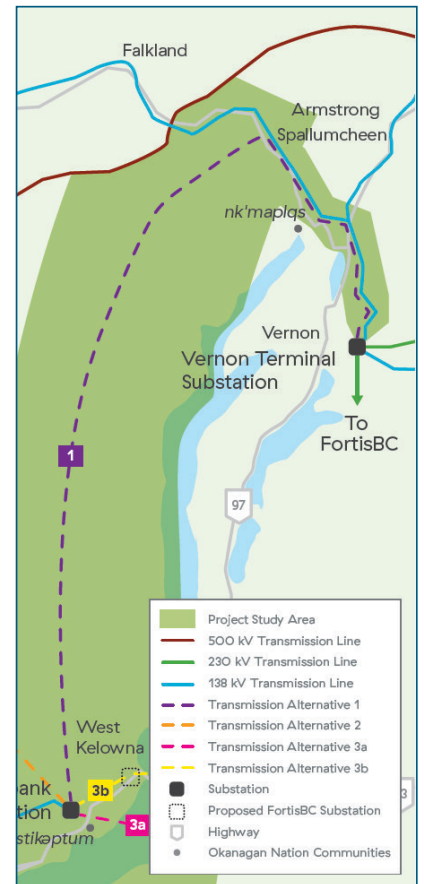
Alternative 2: to Nicola Substation

Substations

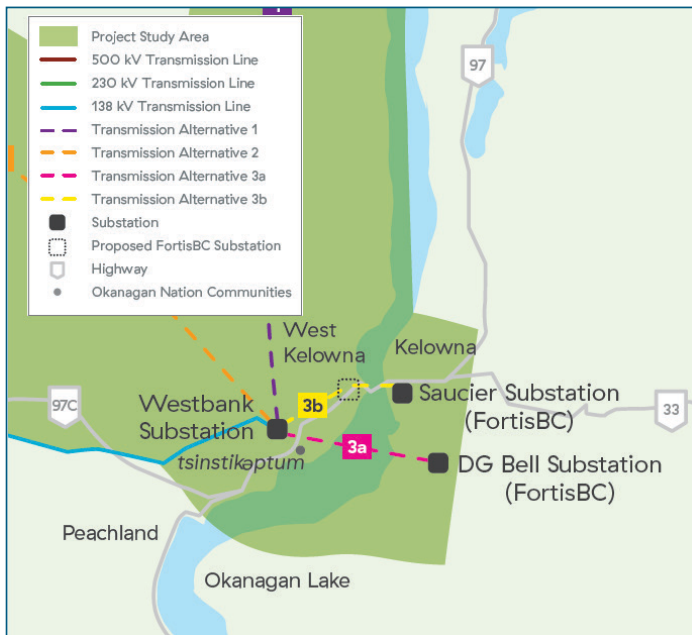


Alternative 1: to Vernon Terminal Substation

- **Safety:** high potential safety risk.
- **Environment:** high potential environmental risk.
- **Cost:** highest cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations and stakeholders:** not supported.
- **Wildfire:** highest potential wildfire risk.
- **Geotechnical:** highest potential geotechnical risk.



Alternative 3: to FortisBC



- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** moderate cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations:** not fully supported.
- **Stakeholders:** generally supported.

- **Wildfire 3a:** second highest potential wildfire risk.
- **Wildfire 3b:** lowest potential wildfire risk.
- **Geotechnical:** low potential geotechnical risk.

Leading Alternative, Alternative 2: to Nicola Substation

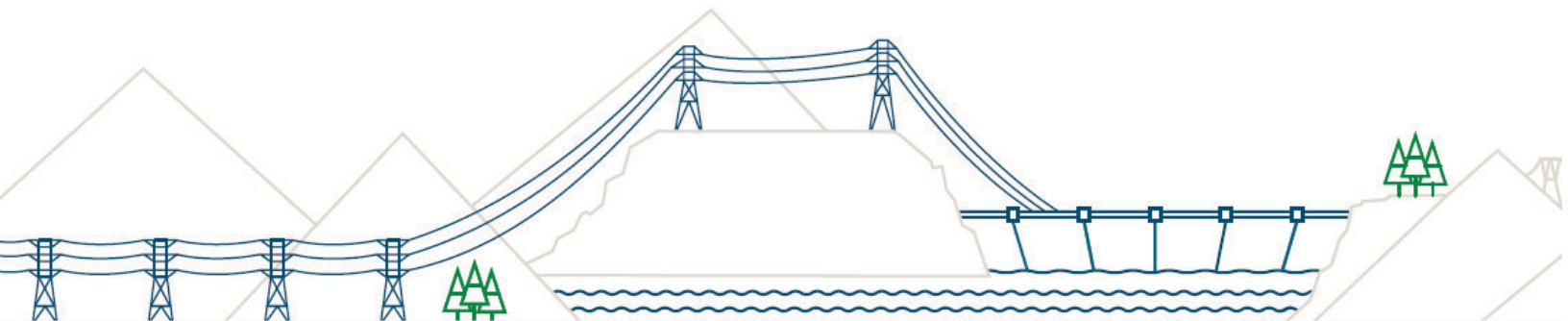


- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** lowest cost compared to other alternatives.
- **Socio-economic:** moderate potential socio-economic risk.
- **First Nations and stakeholders:** generally supported.

- **Wildfire:** second lowest potential wildfire risk after Alternative 3b.
- **Geotechnical:** low potential geotechnical risk.

West Kelowna Transmission Project

Project Update

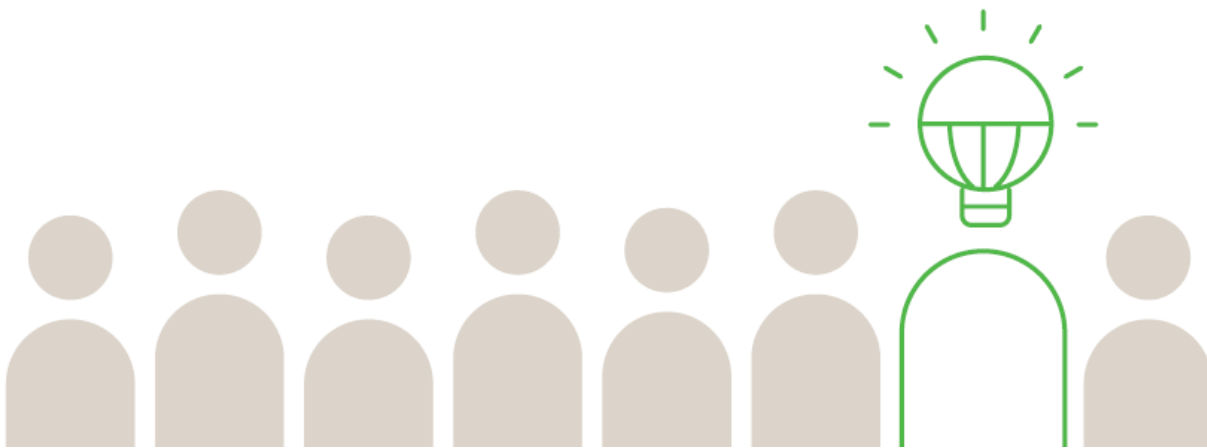


September 5, 2017

 **BC Hydro**
Power smart

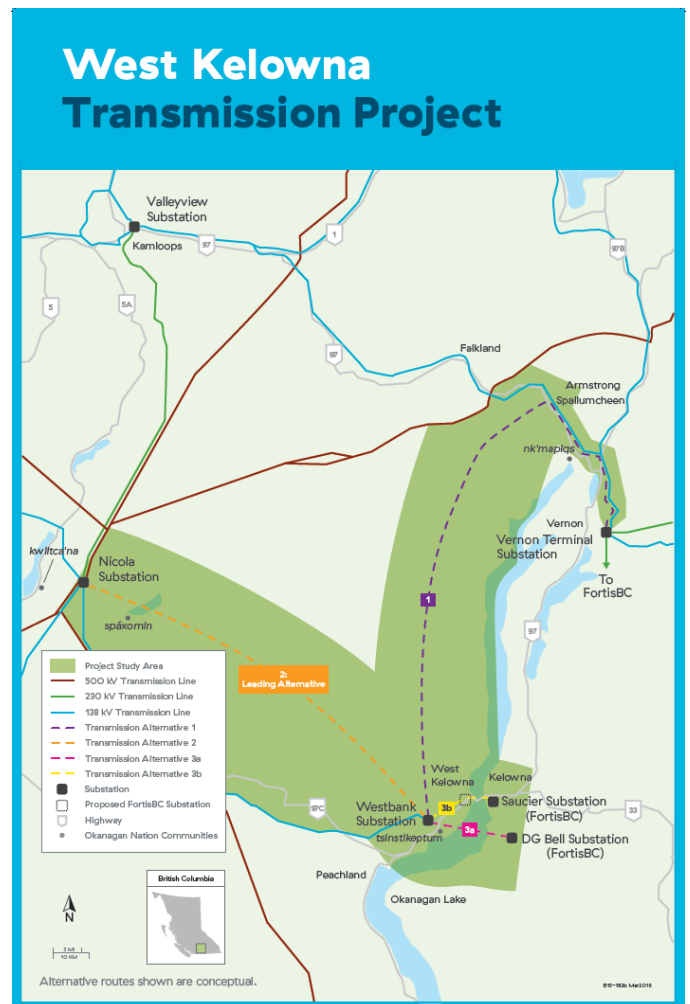
Agenda

- Project Overview
- Review of Alternative 2, Leading Alternative
- Leading Alternative, Preliminary Study Corridors
- Leading Alternative, Preliminary Studies
- Review Alternative 3
- Identifying a Preferred Alternative
- Project Timeline



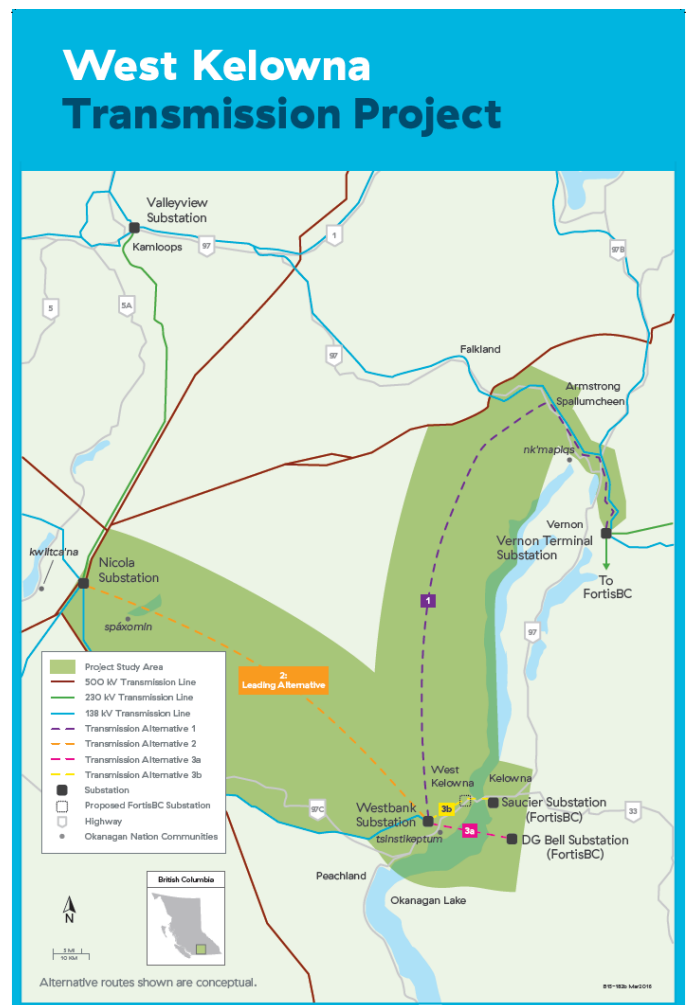
Project overview

- Planning for a new, secondary transmission line to strengthen the transmission network delivering clean, reliable electricity to the communities of West Kelowna and Peachland.
- Will provide a second power source for the area, which is currently served by one 138 kilovolt transmission line.



Project overview

- Spring 2015 to fall 2016, studied three alternatives.
- Last fall, Alternative 2: to Nicola Substation was identified as the leading alternative and will be further studied.
- 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 levels of risk compared to the other alternatives.
- A decision on the preferred alternative is expected to be made in 2018.



Leading Alternative

Why Alternative 2: To Nicola Substation was identified as the leading alternative

- Alternative 2 is more favourable than alternatives 1 and 3 from an overall safety, environmental, socio-economic and cost assessment.
- Alternative 2 poses low geotechnical risk which can be mitigated by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time.
- Alternative 2 has the second lowest fire risk which may be mitigated by use of steel poles, routing, design, adequate separation from the existing line and vegetation management. Nicola Substation is a 500kV station built with redundancy and additional fire protection.
- **Both Alternative 2 and 3 will continue to be studied in the next stage of the project to inform the confirmation of the recommended preferred alternative.**

Leading Alternative (Alternative 2)

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 an area survey by air and geotechnical investigations on the ground.
- Completing a field wildfire risk assessment.
- Selecting transmission line structure type, conductor size, configuration and substation layout requirements.
- Beginning to look at routing options.



Leading Alternative (Alternative 2)

Preliminary Study Corridors

- Studies and findings from the work done to date helped us develop three preliminary study corridors. We used the following information:
 - Environmental Overview Assessment,
 - Geotechnical and Wildfire Fire Risk Assessment,
 - Consultation feedback,
 - Existing mapping information about the area between Nicola and Westbank substations, e.g. access roads, terrain, usage, and,
 - Technical standards and best practice.
- The preliminary study corridor will continue to be refined over the next couple of years.

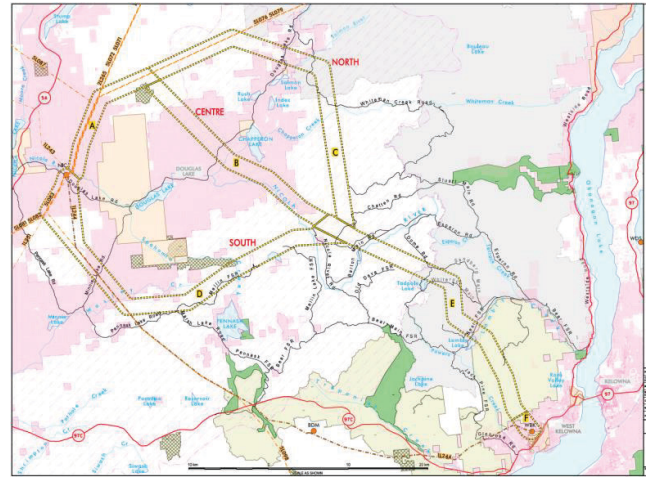
Three Preliminary Study Corridors



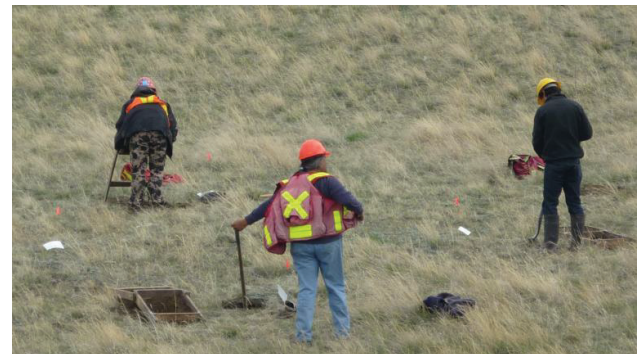
Leading Alternative (Alternative 2)

South Corridor Studies

- BC Hydro is undertaking a desktop and field study program for Alternative 2 on the South preliminary study corridor, starting in June 2017 and running through 2018.
- The study program includes a number of environmental, socio-economic, archaeological, traditional use and engineering studies.
- These studies will inform our project planning including line routing and access plans.
- The study area includes both the Okanagan and Nicola Watersheds.



DRAFT MAP FOR STUDY AND DISCUSSION.



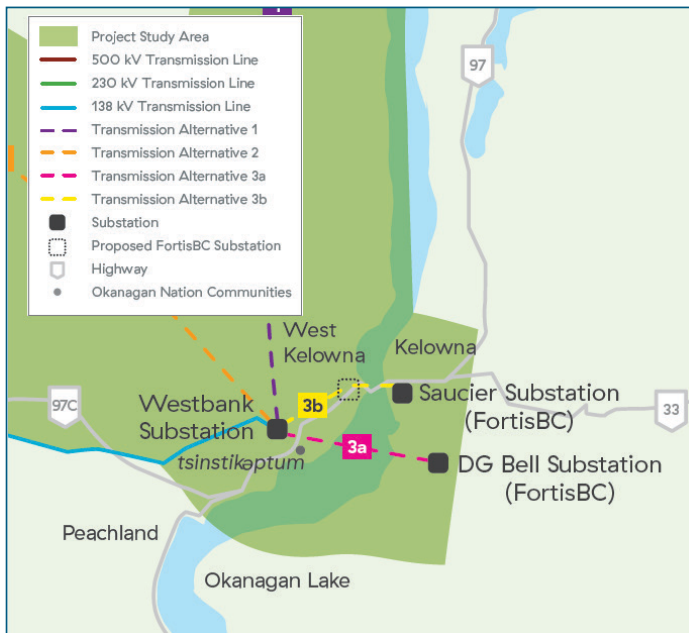
Leading Alternative (Alternative 2)

Wildfire Risk Assessment

- The Wildfire Risk Assessment will be updated to cover the Preliminary Study Corridors, to include:
 - A comparison of the wildfire risk for each study corridor.
 - Study of the risk of simultaneous outage to existing line and a line in each of the study corridors.
 - A review of the finding of occurrence of wildfires with a diameter larger than 20 km based on the lessons learned from the 2017 wildfire season.
 - Recommendations on the mitigation required for each of the study corridors.

Alternative 3: to FortisBC

In this stage, we are:



- Continuing to study Alternative 3 to confirm our assessment.
- Option 3c is similar to 3b except it proposes no new substation in West Kelowna.
- Looking at:
 - Whether a cable can be placed on the bridge
 - Potential transmission routing options and overhead versus undergrounding required
 - Distribution system requirements from the new substation in West Kelowna (option 3b)
 - Clarifying power flow studies carried out by FortisBC
- MOTI has provided feedback that they will not consider the option of installing a transmission line on or near the WR Bennett Bridge because other options are available. They have also expressed concern with allowing the new transmission line in their highway 97 right-of-way and will be asking BC Hydro to obtain their own ROW.
- 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.

Identifying a Preferred Alternative

Structured decision making

- We expect to make a decision on our preferred alternative in 2018.
- Desktop and field studies, First Nations consultation and stakeholder engagement will inform our decision making process.

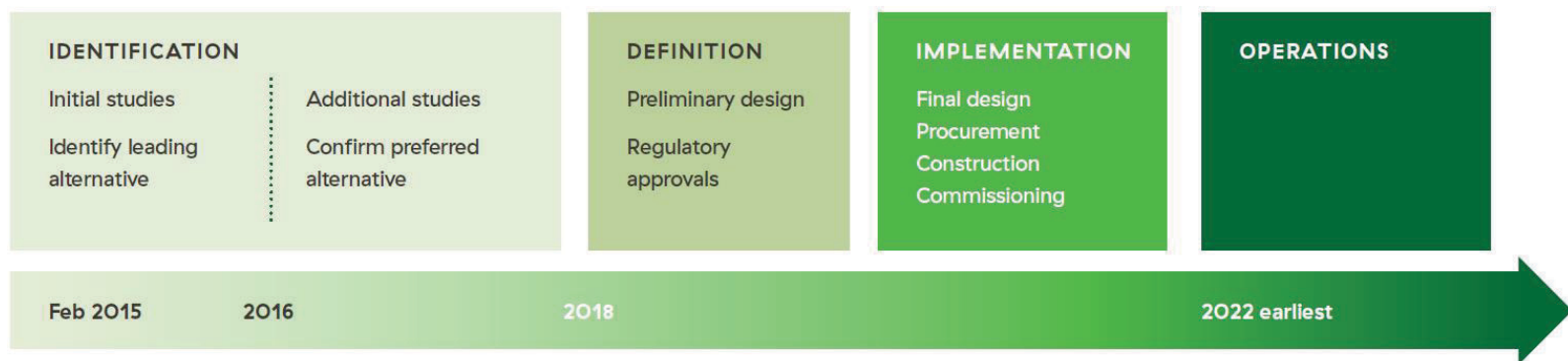
Key aspects will include:

- Safety
- Environment
- Cost
- Socio-economic
- First Nations and stakeholders
- Wildfire
- Geotechnical



Project timeline

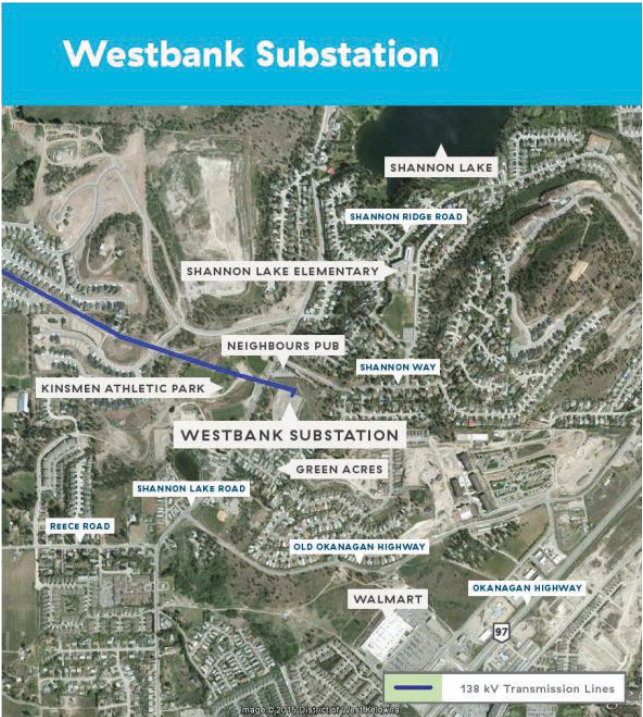
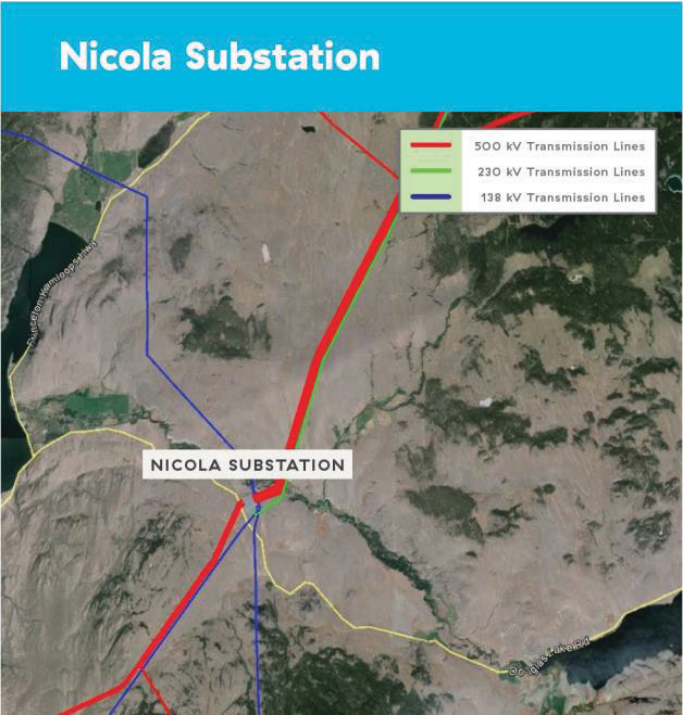
- Conduct desktop and field studies for Alternative 2.
- A review of Alternative 3 is being undertaken in order to confirm our assessments.
- No plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, wildfire and geotechnical risk compared to the other alternatives.
- At the end of this process we expect to make a decision on our preferred alternative in 2018.
- Next round of Public Open Houses anticipated for fall 2017.





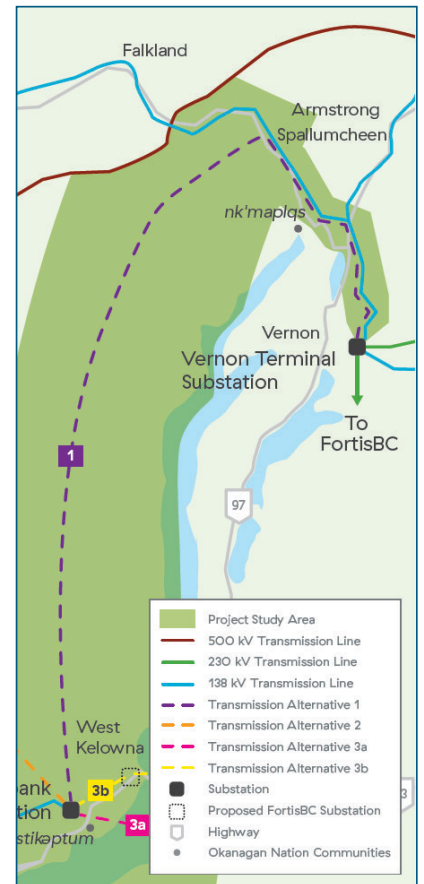
Alternative 2: to Nicola Substation

Substations

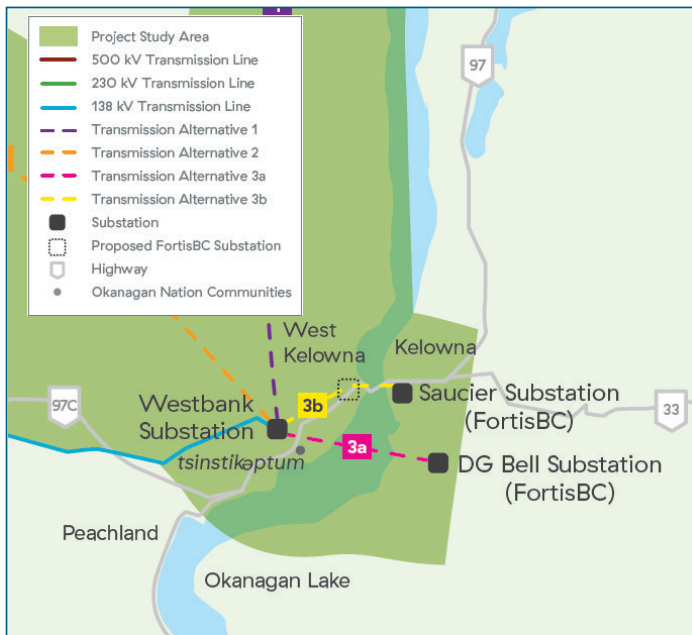


Alternative 1: to Vernon Terminal Substation

- **Safety:** high potential safety risk.
- **Environment:** high potential environmental risk.
- **Cost:** highest cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations and stakeholders:** not supported.
- **Wildfire:** highest potential wildfire risk.
- **Geotechnical:** highest potential geotechnical risk.



Alternative 3: to FortisBC



- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** moderate cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations:** not fully supported.
- **Stakeholders:** generally supported.

- **Wildfire 3a:** second highest potential wildfire risk.
- **Wildfire 3b:** lowest potential wildfire risk.
- **Geotechnical:** low potential geotechnical risk.

Leading Alternative, Alternative 2: to Nicola Substation

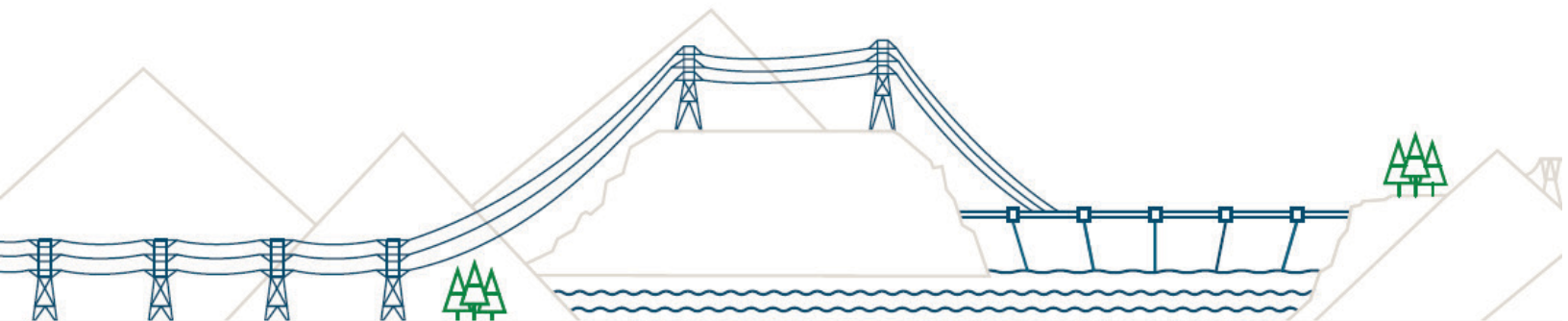


- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** lowest cost compared to other alternatives.
- **Socio-economic:** moderate potential socio-economic risk.
- **First Nations and stakeholders:** generally supported.

- **Wildfire:** second lowest potential wildfire risk after Alternative 3b.
- **Geotechnical:** low potential geotechnical risk.

West Kelowna Transmission Project

Project Update

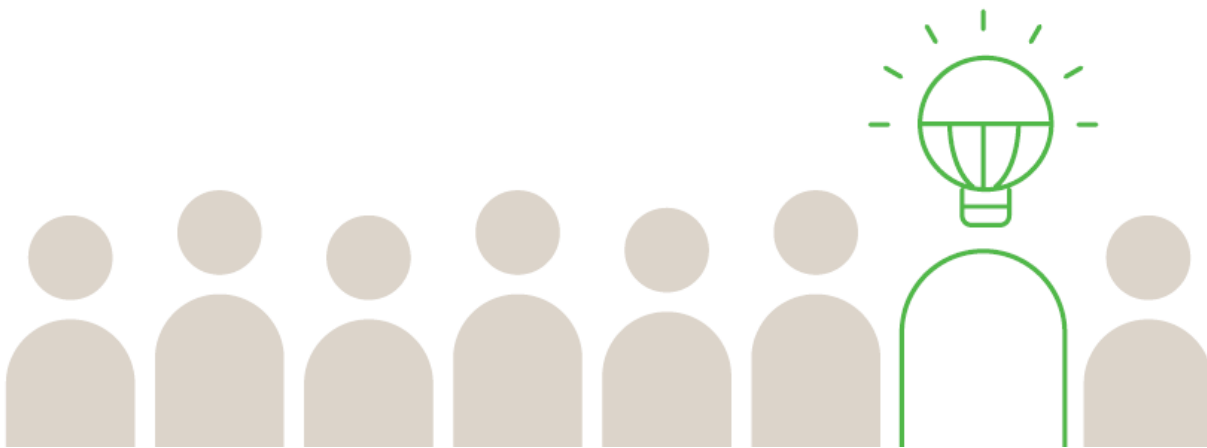


January 10, 2017

 **BC Hydro**
Power smart

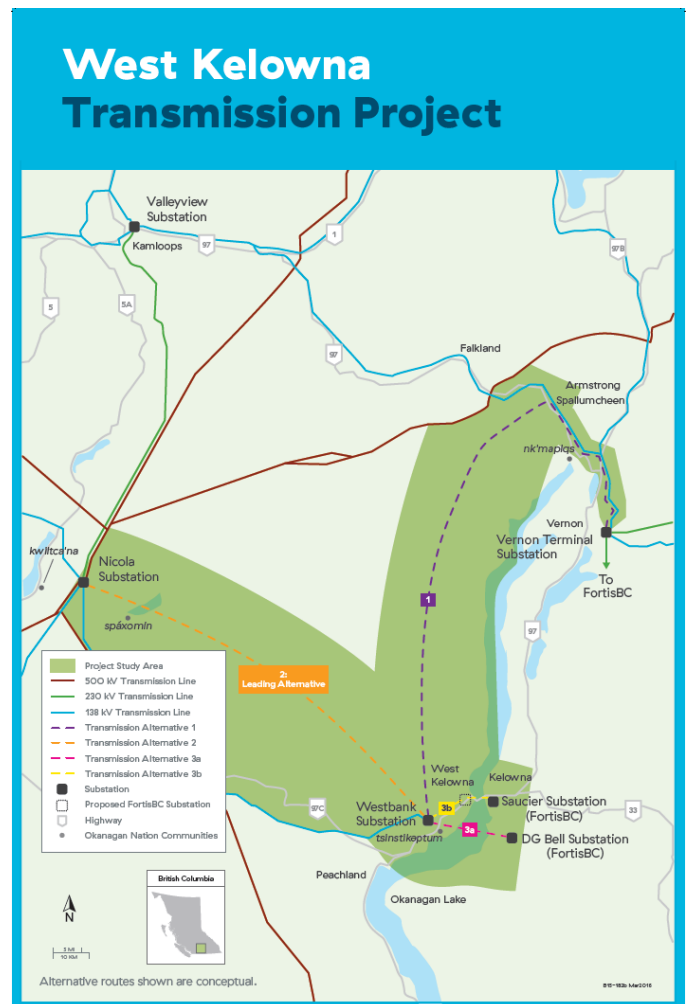
Agenda

- Project overview
- Review of Alternative assessment
- Leading Alternative assessment summary
- Alternative 2: to Nicola Substation – Next Steps
- Alternative 2: to Nicola Substation – Preliminary Study Area
- Project timeline



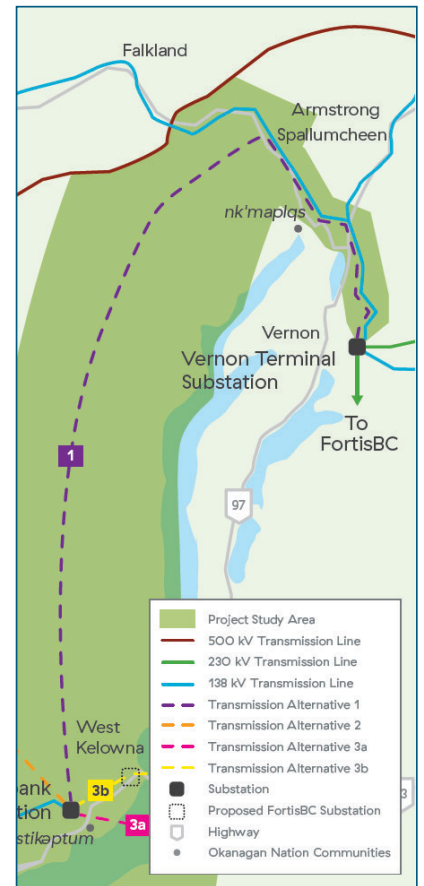
Project overview

- Planning for a new, secondary transmission line to strengthen the transmission network delivering clean, reliable electricity to the communities of West Kelowna and Peachland.
- Will provide a second power source for the area, which is currently served by one 138 kilovolt transmission line.

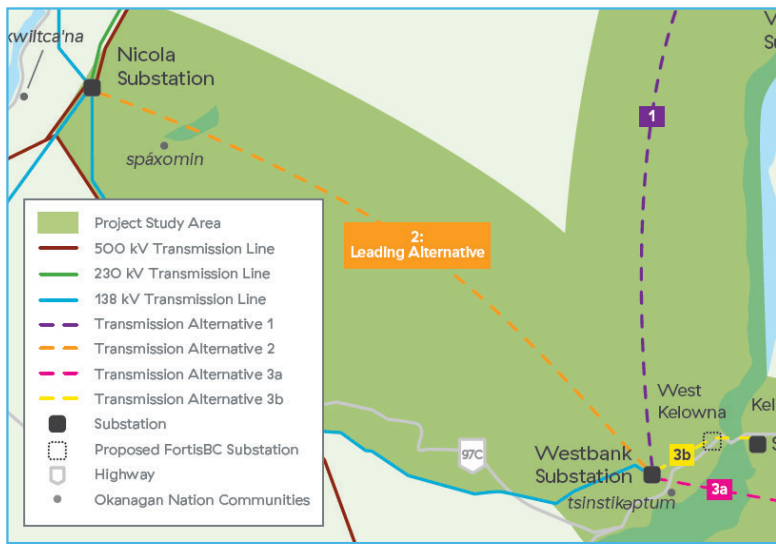


Alternative 1: to Vernon Terminal Substation

- **Safety:** high potential safety risk.
- **Environment:** high potential environmental risk.
- **Cost:** highest cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations and stakeholders:** not supported.
- **Wildfire:** highest potential wildfire risk.
- **Geotechnical:** highest potential geotechnical risk.



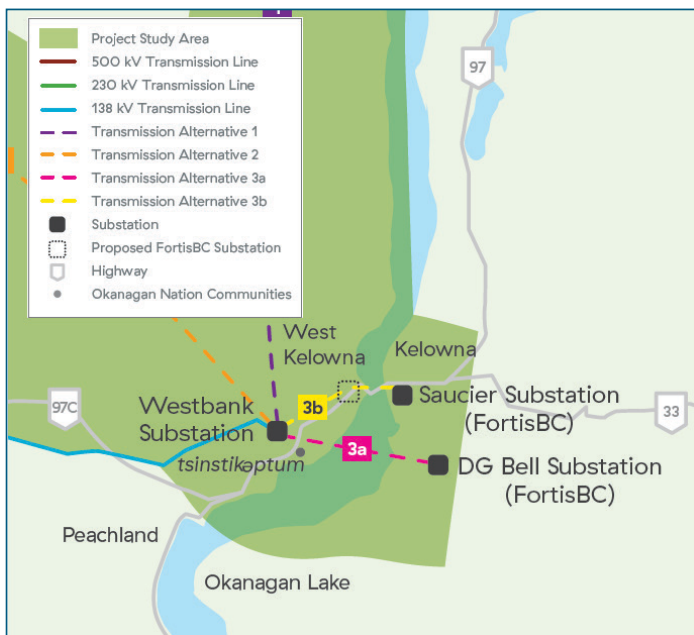
Alternative 2: to Nicola Substation



- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** lowest cost compared to other alternatives.
- **Socio-economic:** moderate potential socio-economic risk.
- **First Nations and stakeholders:** generally supported.

- **Wildfire:** second lowest potential wildfire risk after Alternative 3b.
- **Geotechnical:** low potential geotechnical risk.

Alternative 3: to FortisBC



- **Safety:** low potential safety risk.
- **Environment:** moderate potential environmental risk.
- **Cost:** moderate cost compared to other alternatives.
- **Socio-economic:** high potential socio-economic risk.
- **First Nations:** not fully supported.
- **Stakeholders:** generally supported.

- **Wildfire 3a:** second highest potential wildfire risk.
- **Wildfire 3b:** lowest potential wildfire risk.
- **Geotechnical:** low potential geotechnical risk.

Leading Alternative assessment summary

We identified Alternative 2: To Nicola Substation as the leading alternative for the following reasons:

- Alternative 2 is more favourable than alternatives 1 and 3 from an overall safety, environmental, socio-economic and cost assessment.
- Alternative 2 poses low geotechnical risk which can be mitigated by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time.
- Alternative 2 has the second lowest fire risk which may be mitigated by use of steel poles, routing, design, adequate separation from the existing line and vegetation management. In addition, there is no record of a B.C. wildfire with a diameter larger than 20 km; the study area for Alternative 2 is 50 km wide. Nicola Substation is a 500kV station built with redundancy and additional fire protection.
- **Both Alternative 2 and 3 will continue to be studied in the next stage of the project to confirm a preferred alternative.**

Alternative 2: to Nicola Substation

Next Steps

- Continue consultation with First Nations and stakeholders.
- Conduct detailed environmental, socio-economic, archaeological, traditional use and engineering studies.
- Complete an area survey by air and geotechnical investigations on the ground.
- Select transmission line structure type, conductor size, configuration and substation layout requirements.
- Begin looking at routing options.



Alternative 2: to Nicola Substation

Preliminary Study Area

- The preliminary study area provides a starting point to plan work, and begin discussions and solicit feedback on potential routing options.
- The preliminary study area will continue to be refined over the next couple of years.
- Studies and findings from the work done to date helped us develop the preliminary study area. We used the following information:
 - Environmental Overview Assessment,
 - Geotechnical and Wildfire Fire Risk Assessment,
 - Consultation feedback,
 - Existing mapping information about the area between Nicola and Westbank substation, e.g. access roads, terrain, usage, and,
 - Technical standards and best practice.

Alternative 2: to Nicola Substation

Preliminary Study Area



THIS IS A DRAFT MAP FOR STUDY AND DISCUSSION.

Project timeline

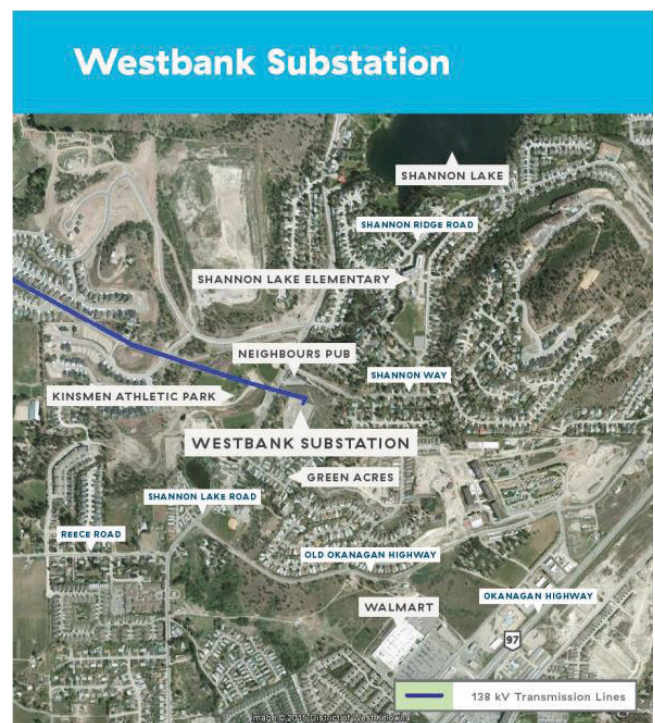
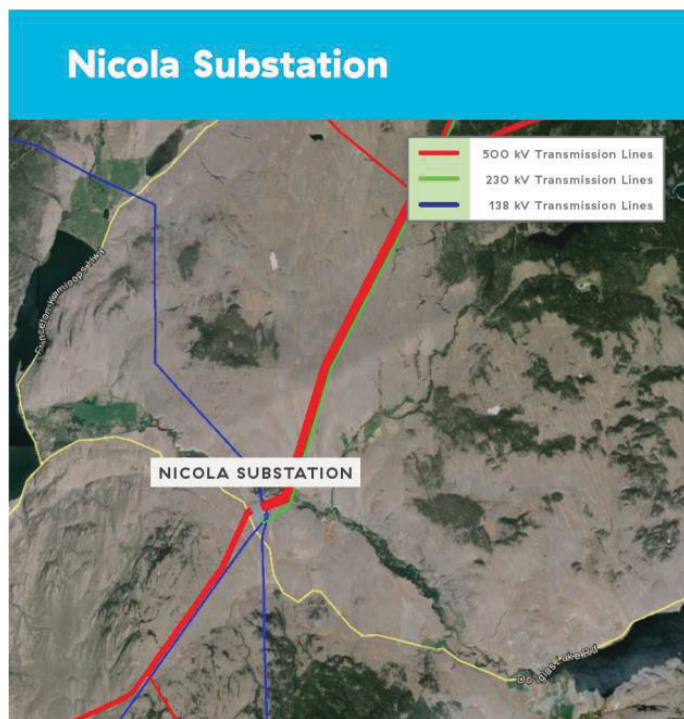
- Conduct detailed studies for Alternative 2.
- Some studies will be completed for Alternative 3 to confirm our assessment.
- No plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, wildfire and geotechnical risk compared to the other alternatives.
- At the end of this process we will make a decision on our preferred alternative, expected to be made in 2017/2018.
- Next round of Public Open Houses anticipated for fall 2017.





Alternative 2: to Nicola Substation

Substations



Appendix C:

Notice of upcoming studies

Sue Foster
Project Manager, BC Hydro
Email: stakeholderengagement@bchydro.com
Office: 1-866-647-3334

May 16, 2017

Re: West Kelowna Transmission Project

We're planning for a new, secondary transmission line delivering clean, reliable power to the communities of West Kelowna and Peachland.

This letter will provide you with an update on the West Kelowna Transmission Project and let you know that our next phase of work may take place near you starting this spring. BC Hydro has identified you as a Crown land tenure holder in the project study area.

What's happened to date

Between spring 2015 and fall 2016, BC Hydro studied three alternatives (see map on page 3) for a new, secondary transmission line.

Our work on all three alternatives included engineering and environmental desktop studies, wildfire and geotechnical risk assessments, as well as First Nations consultation, stakeholder engagement and discussions with all levels of government.

Last fall, we identified Alternative 2 as the leading alternative. This alternative involves building a new transmission line from Westbank Substation to Nicola Substation. It's been assessed as more favourable from an overall safety, environmental, socio-economic, cost, geotechnical and wildfire risk perspective than Alternatives 1: Westbank Substation to Vernon Terminal Substation, and Alternative 3: Westbank Substation to FortisBC System.

What's happening next

During the next stage of the project, we'll undertake visual environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2 as the leading alternative which may include studies in your area. Studies are expected to take place from mid-June 2017 to March 2018. Some studies will also be completed for Alternative 3 in order to confirm our assessments.

There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, geotechnical and wildfire risk. At the end of this stage we will make a decision on our preferred alternative.

As we move forward with our studies, we'll keep you informed of the work that's taking place. We'll also continue working with First Nations and engaging with our stakeholders throughout the planning and implementation of the project.

As we move ahead with the next stage of the proposed project, please feel free to contact us if you have any questions.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sue Foster", with a long horizontal flourish extending to the right.

Sue Foster
BC Hydro Project Manager
West Kelowna Transmission Project

CC: Paul Mayenburg, BC Hydro Properties, West Kelowna Transmission Project
Sabrina Locicero, BC Hydro Stakeholder Engagement, West Kelowna Transmission Project

West Kelowna Transmission Project



Appendix D:

Letter from local government



April 7, 2017

Sabrina Locicero
Stakeholder Engagement Advisor
BC Hydro
333 Dunsmuir, 15th Floor
Vancouver, BC V6B 5R3

Dear Sabrina,

Re: West Kelowna Transmission Project

Thank you for taking the time to discuss BC Hydro's plans to bring an additional electrical transmission line into West Kelowna.

The City of Kelowna has reviewed both options (Alternative 3a and 3b) that would involve the installation of additional BC Hydro infrastructure constructed within City boundaries. In consideration of these alignments, the City opposes the construction of any overhead infrastructure by BC Hydro within City boundaries or to the south of the City and east of Okanagan Lake. The alignments proposed for 3a and 3b pass through densely populated urban areas and in the case of 3a it also passes through popular recreational parkland.

For these reasons the City cannot support overhead infrastructure that may negatively affect the City's urban environment or parkland. We are available to discuss our position if required.

Regards,

A handwritten signature in black ink, appearing to read "Joel Shaw", with a stylized flourish at the end.

Joel Shaw, P.Eng.
Infrastructure Engineering Manager

Appendix E:

Open house materials

WILDFIRE RISK ASSESSMENT

A wildfire risk assessment will be a part of our studies in this stage of the project. An initial wildfire risk assessment was completed in the summer of 2016 by Bruce Blackwell and Associates and assessed the project alternatives and the existing transmission line.

The wildfire risk assessment will be updated to cover the Preliminary Study Corridors, to include:

- A comparison of the wildfire risk for each study corridor.
- Study of the risk of simultaneous outage to existing line and a line in each of the study corridors.
- A review of the finding of occurrence of wildfires with a diameter larger than 20 km based on the lessons learned from the 2017 wildfire season.
- Recommendations on the mitigation required for each of the study corridors.

What's next for Alternative 3: to FortisBC

In this stage we're looking at:

- Whether a cable can be placed on the bridge;
- Potential transmission routing options and overhead versus undergrounding required;
- Distribution system requirements from the new substation in West Kelowna (option 3b); and,
- Clarifying power flow studies carried out by FortisBC.

Identifying a preferred alternative

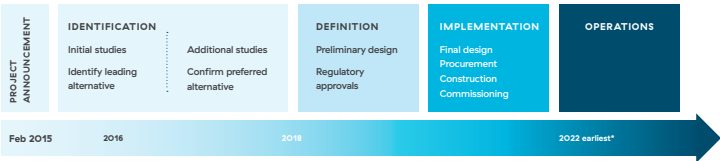
We expect to make a decision on our preferred alternative in 2018.

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

Project timeline



For more information

Visit www.bchydro.com/wktp | Email stakeholderengagement@bchydro.com | Call 1 866 647 3334

*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.



On February 5, 2015, the Province of British Columbia and BC Hydro announced the West Kelowna Transmission Project. We're in the early planning stage for a new, secondary transmission line delivering clean, reliable power to the communities of 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.

What's happened to date

Between spring 2015 and fall 2016, BC Hydro studied three alternatives for a new, secondary transmission line.

- Alternative 1 (to Vernon Terminal Substation): build a new transmission line on the westside of Okanagan Lake, connecting Westbank Substation to the 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 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: connecting VWestbank Substation to DG Bell Substation (Kelowna – Mission area)
 - 3b: FortisBC builds a new substation in West Kelowna and a transmission line crossing Okanagan Lake to Saucier Substation (downtown Kelowna). BC Hydro would build a new transmission line from VWestbank Substation to the new FortisBC substation.
 - 3c: Similar to 3b above except it proposes no new substation in West Kelowna.

Our work on all three alternatives included engineering and environmental desktop studies, wildfire and geotechnical risk assessments, as well as First Nations consultation, stakeholder engagement and discussions with all levels of government.

In November 2016, we identified Alternative 2 as the leading alternative. This alternative involves building a new transmission line from Westbank Substation to Nicola Substation. It's been assessed as more favourable from an overall safety, environmental, socio-economic, cost, geotechnical and wildfire risk perspective compared to Alternative 1: to Vernon Terminal Substation, and Alternative 3: to FortisBC.

Fast facts

WHAT:

We're in the early planning stages for a new transmission line.

WHERE:

In and around West Kelowna and the Central Okanagan.

TIMING:

Earliest in-service date is 2022.

WHY:

To provide redundant transmission service to Westbank Substation in West Kelowna.

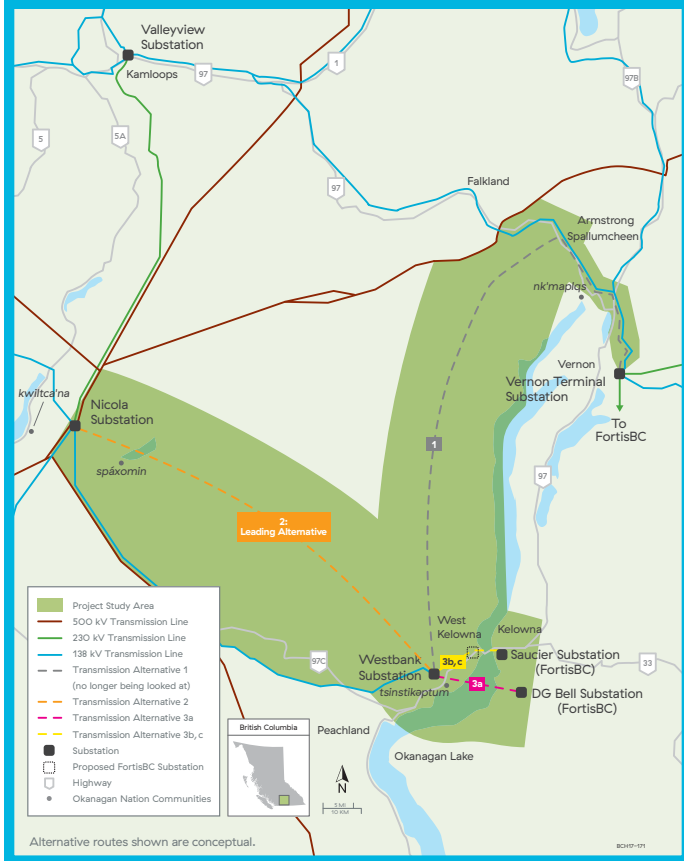
WHAT'S REDUNDANT SUPPLY?

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.

HOW MANY PEOPLE BENEFIT?

About 22,000 BC Hydro customers are served by the Westbank Substation.

West Kelowna Transmission project



What's happening now

During the current stage of the project, we're undertaking environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2 as the leading alternative.

A wildfire risk field and desktop study will also be completed for Alternative 2. Studies are expected to take place from mid-June 2017 through 2018 and include both the Okanagan and Nicola watersheds. These studies will inform our project planning including line routing and access plans. An additional review of Alternative 3 is being undertaken in order to confirm the preferred alternative.

There are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, geotechnical and wildfire risk. At the end of this stage, we will make a decision on our preferred alternative.



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 an area survey by air and geotechnical investigations on the ground.
- Completing a field wildfire risk assessment.
- Selecting transmission line structure type, conductor size, configuration and substation layout requirements.
- Beginning to look at routing options.

PRELIMINARY STUDY CORRIDORS

We've also assessed 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 with First Nations, the public and government

The selected corridor will be refined over the next few years.



West Kelowna Transmission project



Come see what we're studying!

We're planning for a new secondary transmission line to strengthen the transmission network delivering clean, reliable electricity to West Kelowna and Peachland.

During the current stage of the project, we're undertaking environmental, socio-economic, archaeological, traditional use and engineering studies for Alternative 2 as the leading alternative. A wildfire risk field study will also be completed for Alternative 2. Studies are expected to take place from mid-June 2017 through 2018 and include both the Okanagan and Nicola watersheds. These studies will inform our project planning, including line routing and access plans. An additional review of Alternative 3 is being undertaken in order to confirm our assessment and identify the preferred alternative expected in 2018. You can join us at an open house to hear the latest about the project.

You can drop in anytime between 5:00 p.m. and 8:00 p.m. on:

Tues, November 7, 2017 – Peachland

Peachland Community Centre
4450 6th St, Peachland

Wed, November 8, 2017 – West Kelowna

Westbank Lions Community Centre
2466 Main St, West Kelowna

Thurs, November 9, 2017 – Kelowna

Coast Capri Hotel
1171 Harvey Ave, Kelowna

Can't make it?

Contact us at **1 866 647 3334** or **stakeholderengagement@bchydro.com**, or visit **bchydro.com/wktp** to find out about the project.

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

BC Hydro open house

West Kelowna Transmission Project

We're planning for a new secondary transmission line, to strengthen the transmission network delivering clean, reliable electricity to West Kelowna and Peachland. Join us at an open house to hear the latest about the studies that are underway. You can drop in anytime between 5:00 p.m. and 8:00 p.m. In:

Peachland

Tuesday, November 7, 2017

Peachland Community Centre, 4450 6th St, Peachland

West Kelowna

Wednesday, November 8, 2017

Westbank Lions Community Centre, 2466 Main St, West Kelowna

Kelowna

Thursday, November 9, 2017

Coast Capri Hotel, 1171 Harvey Ave, Kelowna

Can't make it?

Contact us at 1 866 647 3334 or stakeholderengagement@bchydro.com, or visit bchydro.com/wktp to find out more about the project.

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 for a new, secondary transmission line delivering clean, reliable power to the communities of West Kelowna and Peachland.

The new transmission line will strengthen and reinforce the existing transmission network.

We're here to share the most recent project information and to gather your comments on what we know so far. We hope you'll share your local knowledge of the project study area with us.

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:

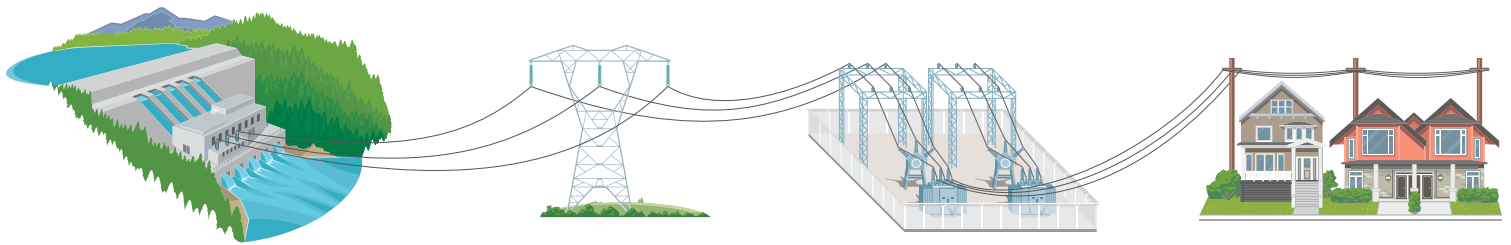
- The large number of customers served by a single transmission line.
- The challenge of restoring power on the existing transmission line resulting from its 80 kilometre length, remote location and rough terrain.
- The risk of destructive forces like forest fires and landslides.

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.

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.

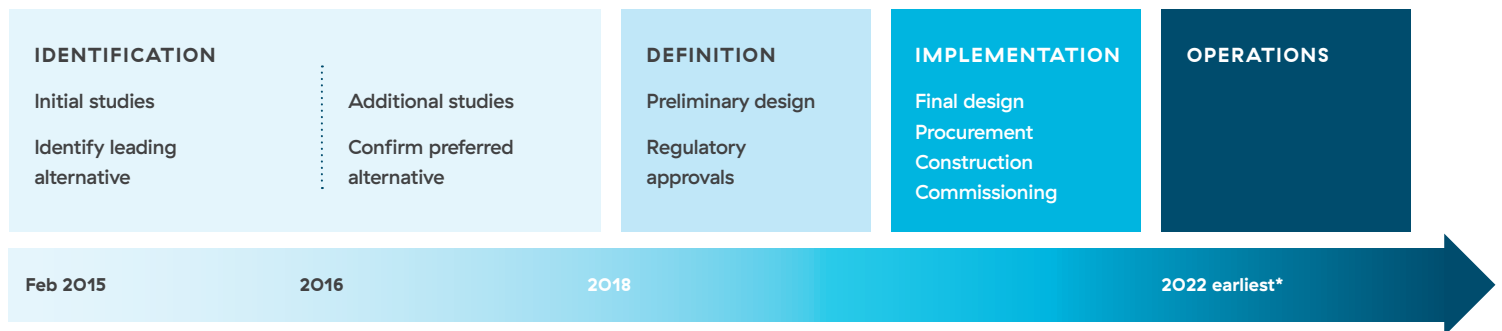
Substations

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

Distribution

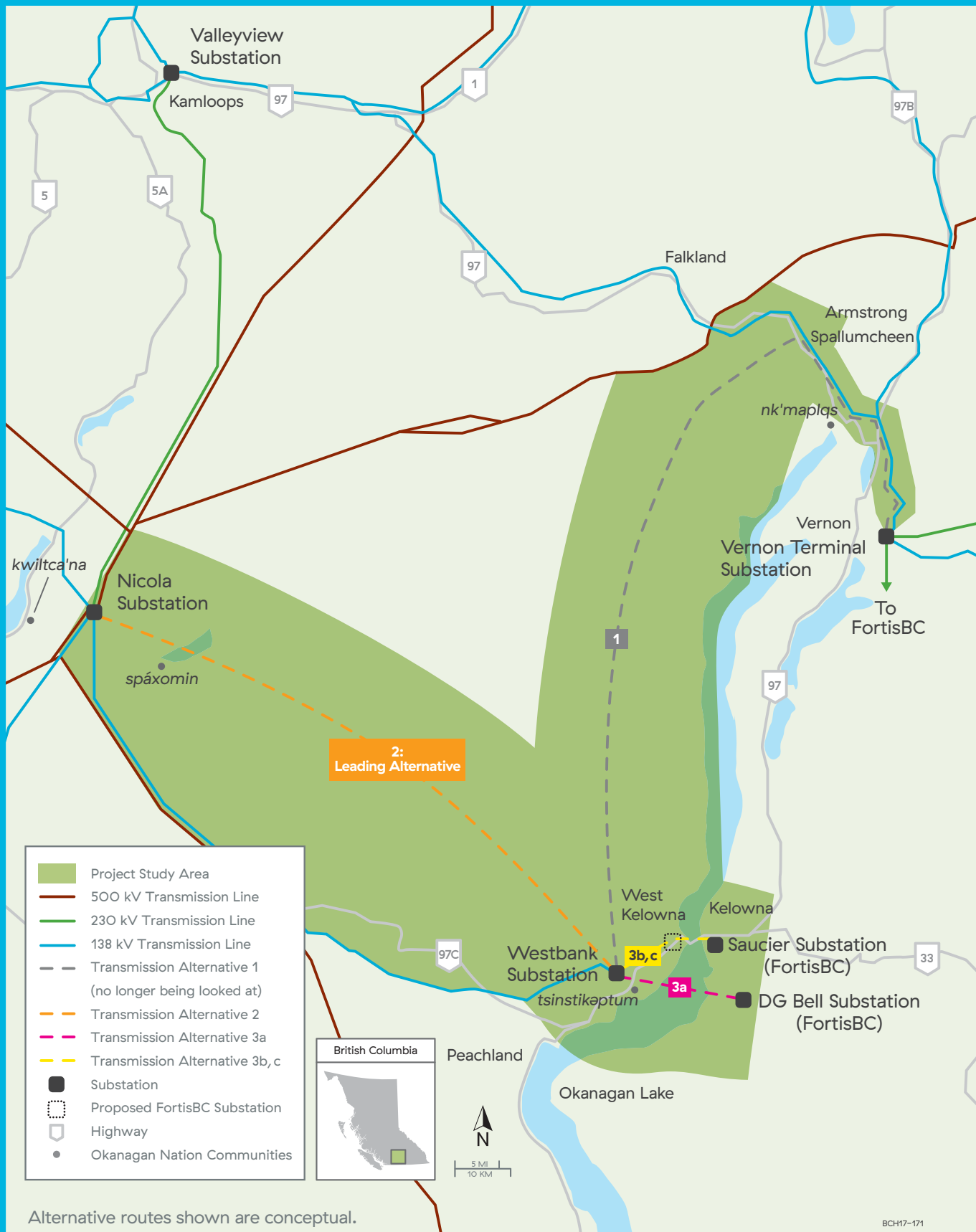
Low voltage electricity is provided to neighbourhoods and businesses.

Project timeline



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

West Kelowna Transmission Project



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.

During this phase 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 this stage of the project.

Project status

- Spring 2015 to fall 2016, studied three alternatives.
- Last fall, Alternative 2: to Nicola Substation was identified as the leading alternative and will be further studied.
- 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 levels of risk compared to the other alternatives.
- A decision on the preferred alternative is expected to be made in 2018.



Why Alternative 2: To Nicola Substation was identified as the leading alternative

- Alternative 2 is more favourable than alternatives 1 and 3 from an overall safety, environmental, socio-economic and cost assessment.
- Alternative 2 poses low geotechnical risk which can be mitigated by routing and design of the new line. It is unlikely that an event (e.g. landslide) would impact the existing line and the new line at the same time.
- Alternative 2 has the second lowest fire risk which may be mitigated by use of steel poles, routing, design, adequate separation from the existing line and vegetation management. Nicola Substation is a 500kV station built with redundancy and additional fire protection.
- Both Alternatives 2 and 3 will continue to be studied in the next stage of the project to confirm the preferred alternative.

What's happening now

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 an area survey by air and geotechnical investigations on the ground.
- Complete 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.



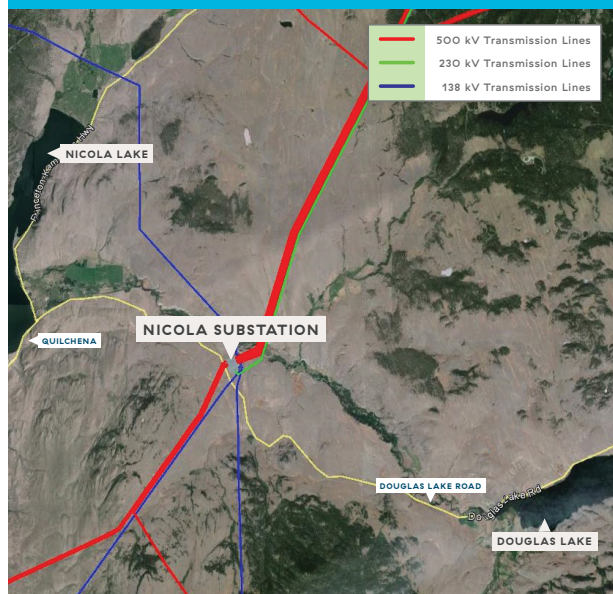
Alternative 3: to FortisBC

In this stage we're looking at:

- Whether a cable can be placed on the bridge;
- Potential transmission routing options and overhead versus undergrounding required;
- Distribution system requirements from the new substation in West Kelowna (option 3b); and,
- Clarifying power flow studies carried out by FortisBC.

Leading alternative, Alternative 2: to Nicola Substation

Nicola Substation (Alternative 2)



Westbank Substation West Kelowna (Alternatives 1, 2 and 3)



Leading alternative, Alternative 2: to Nicola Substation

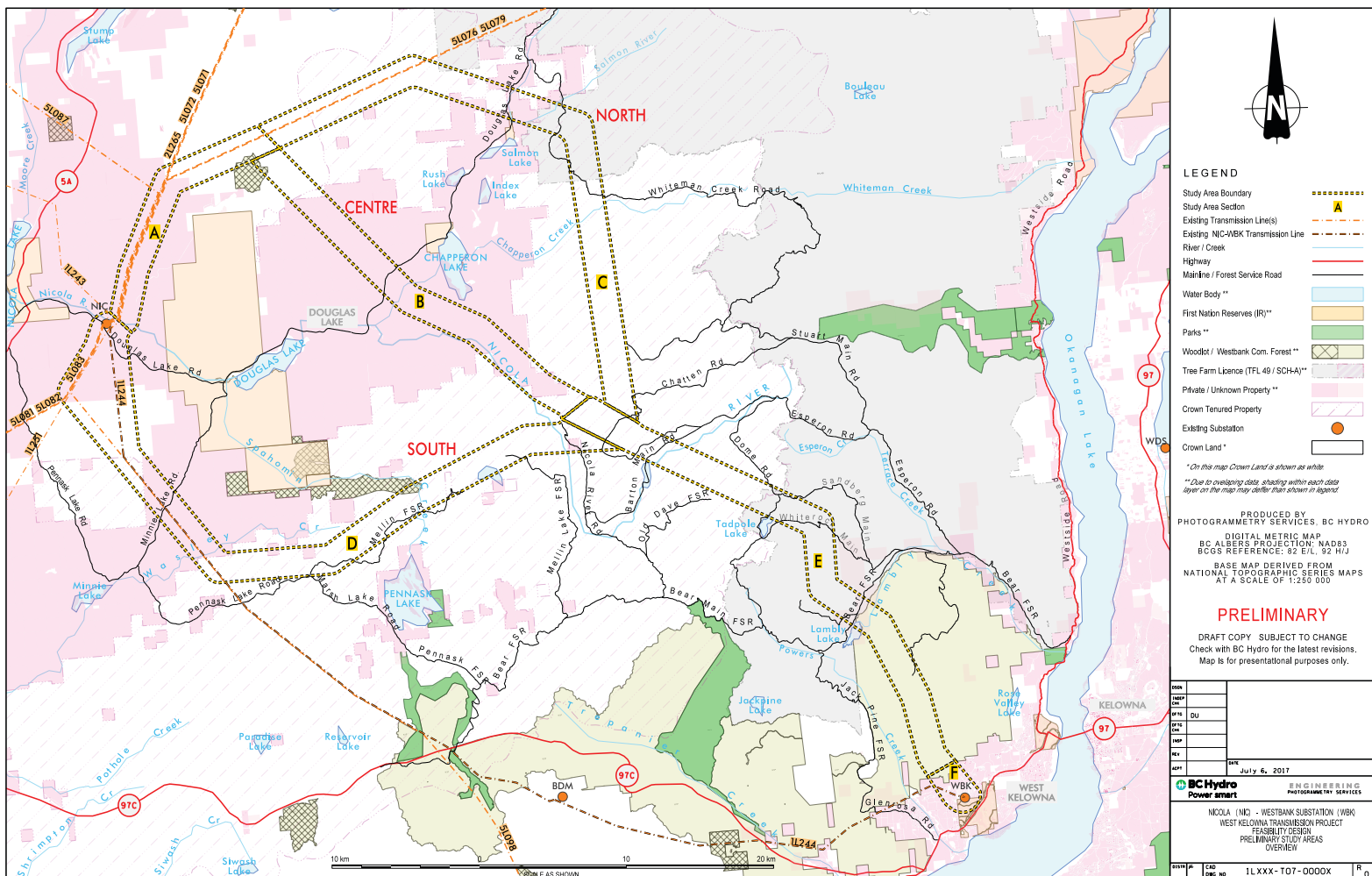


Preliminary Study Corridors

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 with First Nations, the public and government

The selected corridor will be refined over the next few years.



Leading alternative, Alternative 2: to Nicola substation

South Preliminary Study Corridor Field Studies

Archeological Overview Assessment Summer 2017

Identify known archeological sites within the study area, develop a model to determine areas of risk.

Wildlife and Wildlife Habitat Survey 2017–2018

Verify the presence of any sensitive habitats and threatened species.

Vegetation Survey 2017–2018

Identify sensitive ecosystems and areas with invasive weeds.

Fish and Aquatic Habitat Survey 2017–2018

Document aquatic features and identify potential impacts.

Socio-economic Assessment 2017–2018

Define the potential effects on local populations and economy, looking at factors such as employment opportunities and potential impacts to communities.



Leading alternative, Alternative 2: to Nicola substation

South Corridor Field Studies

First Nations Traditional Use Studies 2017–2018

Identify traditional uses of the land by First Nations

Terrain Survey (LIDAR) and photography 2017

Used to create high-resolution maps that allow us to build computer models of a transmission line.

Geotechnical investigations 2017–2018

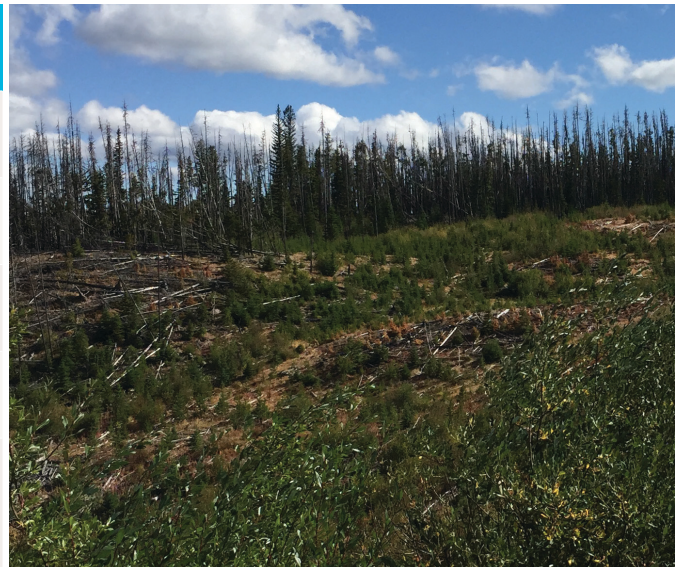
Determines physical properties of soil and underlying rock to help inform the project design.

Soil Type and Resistivity Assessment 2018

Determines the thermal or electrical properties of the ground to inform the project design.

Access Planning 2017–2018

Determines if existing roads can be used to access a new transmission line and where new access roads will be required for construction and future line maintenance.

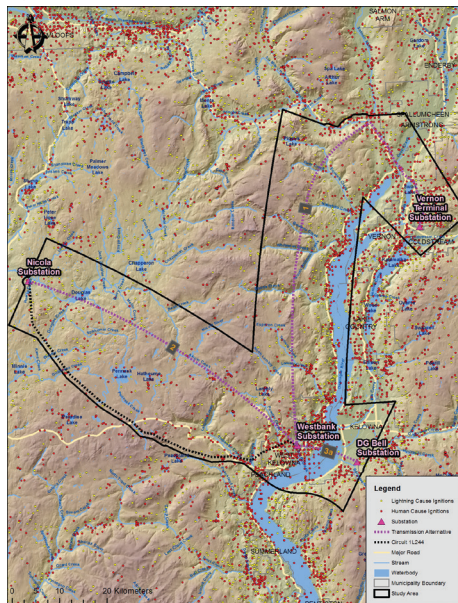


Wildfire study to date

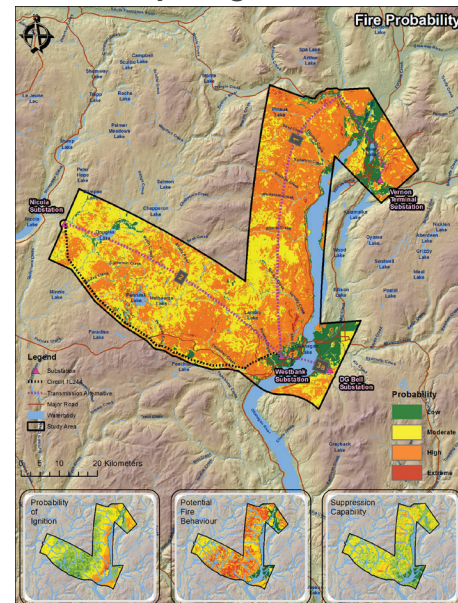
An initial wildfire risk assessment was completed in 2016 for each alternative and the existing transmission line by B.A. Blackwell and Associates.

The study assessed/compared the likelihood, impact and mitigation for each alternative in terms of the probability of ignition, fire behaviour and suppression response capability.

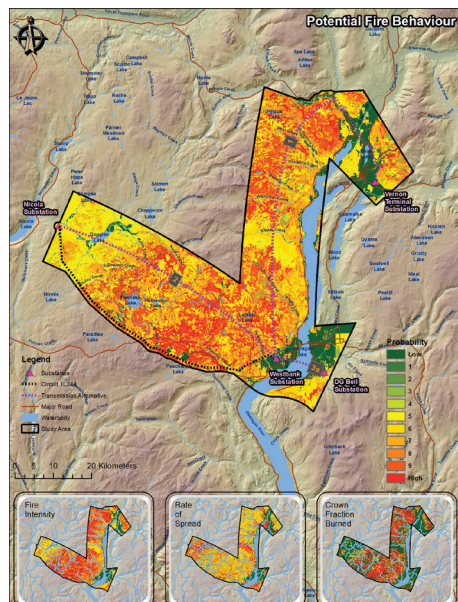
Ignition History



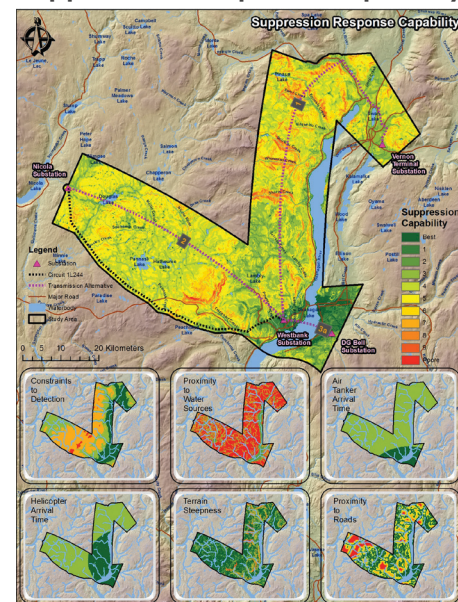
Probability of Ignition



Fire Behaviour



Suppression Response Capability



Leading alternative, Alternative 2: to Nicola Substation

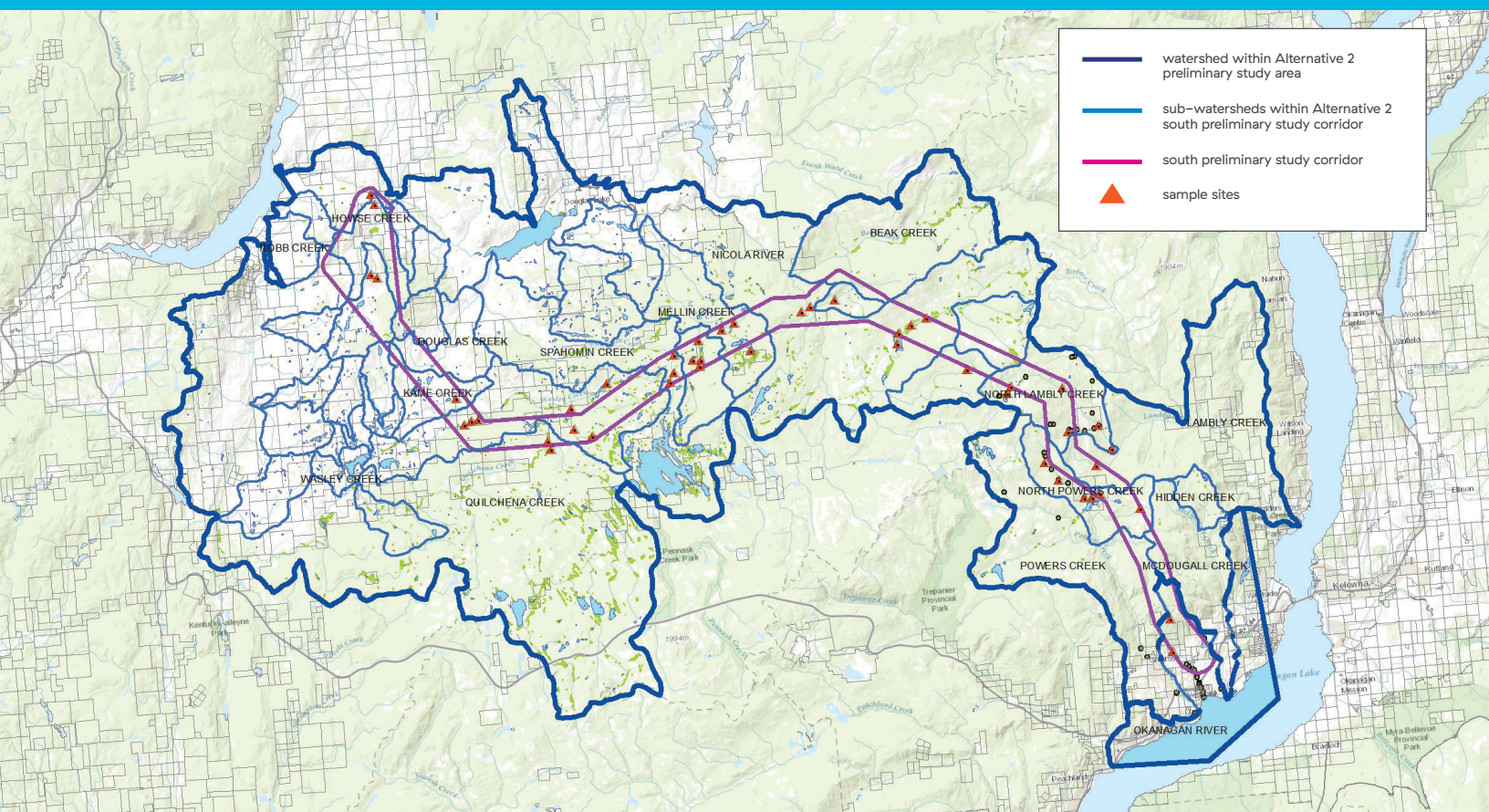
Wildfire Risk Assessment

The Wildfire Risk Assessment will be updated to cover the Preliminary Study Corridors, to include:

- A comparison of the wildfire risk for each study corridor.
- Study of the risk of simultaneous outage to existing line and a line in each of the study corridors.
- A review of the finding of occurrence of wildfires with a diameter larger than 20 km based on the lessons learned from the 2017 wildfire season.
- Recommendations on the mitigation required for each of the study corridors.



Fisheries Field Sites



Stakeholder engagement



We're developing mutually beneficial relationships with communities, stakeholders and members of the public by:

- Encouraging your participation;
- Providing you with timely information;
- Receiving your input; and
- Letting you know the outcomes of the engagement process.

SO FAR WE'VE:

- Launched a project website at bchydro.com/wktp that includes current and archived project information.
- Kept the public informed about the project through local media, events, direct mail and email.
- Held public open houses in June 2015, November 2015, and June 2016, and posted communication and consultation summaries online for each.
- Met with the City of West Kelowna, District of Peachland, Central Okanagan Regional District, City of Vernon, Township of Spallumcheen and City of Kelowna.

GOING FORWARD WE'LL:

- Continue meeting with and updating key municipalities, regional districts and other stakeholder groups.
- Provide project updates to interested stakeholders.
- Hold additional public open houses, as we move forward with this project.

Consultation will be ongoing throughout the life of the West Kelowna Transmission Project.

Next steps



Studies

From June 2017 through 2018, we'll continue to conduct desktop and field studies for the leading alternative, Alternative 2: to Nicola Substation. We'll also complete a review of Alternative 3 to confirm our assessments. However, there are no plans to continue to study Alternative 1 as it poses the highest level of safety, environmental, socio-economic, cost, wildfire and geotechnical risk compared to the other alternatives.

Identifying a preferred alternative

We expect to make a decision on our preferred alternative in 2018.

Desktop and field studies, First Nations consultation and stakeholder engagement will inform our decision making process.

Key aspects will include: safety, cost, socio-economic, First Nations and stakeholders, wildfire and geotechnical.

For more information, please visit bchydro.com/wktp or contact us at 1 866 647 3334, or stakeholderengagement@bchydro.com.