

Project Title:	Willoughby Property Purchase		
SAP Project #:	TM-0592	Project Manager:	Robert Hepple

1. Project data

1.1. Standard References

Project Phase(s)/Stage(s):	IDN - Conceptual Design
Originating Organization:	Substations Growth & Sustainment
Project Initiator:	Maureen Daschuk
Project Sponsor:	Charlotte Mitha
Project Manager:	Robert Hepple
Program Manager:	N/A

1.2. Statement of Objectives Revision History

Phase/Stage	Revision #	Key Changes Made	Date
Conceptual Design & Business Case Appendix	0		

1.3. Project Background

Langley is one of the fast-growing areas in the Lower Mainland. Load growth in the north Langley area requires the development of a new 230/25kV, 200MVA outdoor substation by F2032 to meet future load growth. Currently there are no BCH owned properties available to serve as a station site.

The Langley area is presently supplied by three substations, Port Kell (PKL), Harvey Road (HRD) and McLellan (MLN). PKL and HRD are at their ultimate capacities of 100MVA in Winter and 79MVA in Summer. MLN is being upgraded to 400MVA in Winter and 315MVA in Summer, however, by F2033 most of the augmented capacity will be used. Therefore, a new substation, particularly in the Willoughby area where the load is growing rapidly, is required by F2032 to meet the future load growth.

The objective of the TM-0592 Project is to purchase at least 48,560 M² (12.0 acres) of suitable property, at a reasonable distance from the Willoughby distribution load center and two transmission connections from MLN, to allow a 230/25kV, 200 MVA ultimate outdoor substation and a future 230/60kV switching station to be built.

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2. Project Initiator's Statement of Summary Requirements

2.1. *Statement(s) of the business problem or opportunity and the required response*

Problem

- A new substation is required in the Willoughby area to support load growth and the electrification plan for the area after F2033. There are no BC Hydro owned properties in the area to serve as a station location.

Required Response

- Purchase a suitable property for the future development of an ultimate 230/25kV, 200 MVA outdoor substation and a 230/60kV switching station in the Willoughby area.

2.2. *Safety, Security (Critical Infrastructure Protection) and Confidentiality Requirements*

- The site must be safe for construction, operation/ maintenance and for public.

2.3. *Maintenance and Operational Requirements*

- Property must be large enough to fit a 230/25kV, 200 MVA substation and a 230/60kV switching station, based on the SC-1 model. Initial property size requirements are approximately 48,560 M² or 250 M x 194 M (12.0 acres).
- Ensure the internal roads at the site will provide sufficient access to equipment and buildings for repair and maintenance purposes.
- Ensure suitable access to the station is available.

2.4. *Indigenous Relations Business Strategy Requirements*

With the intention of gaining First Nations' support for the project through relationship building, listed below are Indigenous Relations' business strategy requirements expected to be delivered by this project:

- Building a new substation triggers the duty to consult.
- The level of effort for the property acquisition will be low but the level of effort for the new substation will likely be high (new substations are typically high-impact projects). The level of incremental impact may change depending on the location chosen.

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2.5. Project Initiator's Design Requirements

The Project Initiator has the following high level Design Requirements for the project:

- Consider orientations of the station layout to make the best possible use of the site while ensuring the future ultimate layout is not compromised including transmission and distribution supply.
- Reasonable proximity to viable transmission supply.
- Reasonable proximity to the load center for distribution.
- Adequate egress/ingress for 25kV, 60kV and 230kV cables. Access to 3 sides of the substation is preferred.

2.6. Project Initiator's Interim Decision Requirements

The Project Initiator requires the following items, in addition to the above requirements, for the current project phase(s)/Stage(s). The list includes the Project Initiator's requirement for approval, acceptance, or permission to proceed for each item.

- None identified currently.

3. Project Manager's Proposed Summary Objectives to Achieve Requirements

3.1. Scope Objectives

Project

- Purchase a suitable property for the future development of an ultimate 230/25kV, 200 MVA outdoor substation and a 230/60kV switching substation in the Willoughby area.

Options to be considered:

Three alternative properties of the 16 identified have been shortlisted using the SDM for further investigation. Other properties may be identified the Concepts Phase. Consultation with all stakeholders will be conducted in the Concepts phase. For the current phase, the optional properties are identified as:

- Option One – Alternative 14
 - PID 006-845-851, 006-845-860, 006-845-878
 - NW Corner of 192 St & 80 Ave. Langley
- Option Two – Alternative 15, ALR Property
 - PID Portion of 003-179-184
 - North of 88th Ave and 192 St. Surrey
- Option Three – Alternative 16, Joe Varing Property
 - PID 004-417-275, 008-822-158, 008-822-174, 004-406-290, 001-971-860
 - SE Corner of 78th Ave & 216 St Langley

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Current Phase/Stage –

- Conduct various studies intended to confirm the suitability of each property and provide enough information so that a single property and a backup can be selected to take forward with a recommendation to purchase in the next phase.

3.2. **Schedule Objectives**

Project

The target dates for milestone events for the project are:

Date	Description	PPM Milestone UID
04 Feb 2026	IDN Feasibility + DEF Complete	2.01, 2.02
30 Oct 2026	ISD	1.01
22 January 2027	Project Complete & Evaluation Report Signed & Accepted	3.08
15 April 2027	Project Financial Close	3.58

Current Phase/Stage

The dates for milestone events for this phase/stage are:

Date	Description	PPM Milestone UID
14 April 2025	IDN – Conceptual Design Stage Complete	3.01

3.3. **Cost Objectives**

Current Phase/Stage -

- The total expected cost for this phase/stage of the project is \$499K
- The total project funding to the end of this phase/stage of the project is an Expected Cost of \$612K

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4. Approvals

Robert Hepple is appointed Project Manager with authority and responsibility in accordance with the Project Management Policies and Procedures of BC Hydro, Capital Infrastructure Project Delivery and Engineering.

Accepted by:	<u>Robert Hepple</u> Robert Hepple Project Manager	<u>04-30-2024</u> Date
Reviewed¹ by:	<u>Parman H</u> Surinder Parmar, Team Lead, Stations, PD	<u>30 Apr 2024</u> Date
Initiator:	<u>Maureen Daschuk</u> Maureen Daschuk EVP, Integrated Planning	<u>May 13, 2024</u> Date
Sponsor:	<u>Charlotte Mitha</u> Charlotte Mitha EVP, Operations	<u>May 13, 2024</u> Date

To be completed by Finance

FAAP Approver: _____

*Only for **EAR Exempt** CIPD projects <\$500k where SoO used in place of Business Case and where an EAR form is not prepared by Finance*

¹ For compliance with PPM Practices.

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