

SITE C PROJECT CONSTRUCTION

TRANSMISSION WORKS

Transmission works include the construction of two new 500 kV transmission lines along an existing right-of-way between the Site C project and the Peace Canyon generating station, a distance of approximately 75 kilometres. A new Site C substation will be constructed adjacent to the Site C powerhouse and will connect the Site C generating station to the new transmission lines. The Peace Canyon 500 kV gas-insulated switchgear will be expanded to incorporate the new transmission lines and to connect Site C to the BC Hydro transmission system.

Site C project transmission works will include the following activities:

- Surveying and staking for towers
- Construction/upgrading of existing access roads
- Right-of-way preparation, clearing and restoration
- Transmission line construction, including foundation installation, tower assembly and conductor stringing
- Peace Canyon 500 kV switchyard expansion including site preparation, civil and electrical work
- Site C substation construction, including civil and electrical work



Anticipated timeline

- Survey and staking: spring/summer 2018
- Access road construction/upgrades: early 2018 to fall 2019
- Right-of-way clearing: early 2018 to spring 2019
- Construction of transmission lines: fall 2018 to 2023
- Peace Canyon switchyard site clearing: early 2018
- Expansion of the Peace Canyon switchyard: 2018 to 2019
- Construction of Site C substation: 2018 to 2020

Transmission corridor

The new 500 kV transmission lines will be constructed on an existing transmission right-of-way to the south of the Peace River between the Peace Canyon generating station and the Site C project area. A portion of this right-of-way is currently occupied by two 138 kV transmission lines, serving Fort St. John and Taylor.

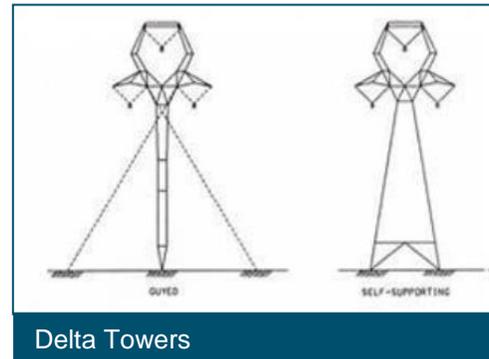
The first 500 kV transmission line will be constructed along the unoccupied north side of the right-of-way alongside the existing 138 kV lines. The 138kV lines supplying Fort St. John and Taylor will be re-connected to the Site C substation, and the remaining portions of the lines between Peace Canyon and Site C will be removed. This will create room to safely install the second 500 kV transmission line. The continual supply of electricity to the communities will be maintained.

When complete, the Site C project's 500 kV transmission lines will become part of the overall BC Hydro transmission system and will undergo the same type of operation and maintenance activities as other transmission lines throughout B.C.

Design progression

Delta-type towers have been selected for the majority of the new 500 kV transmission line, as shown in the figure to the right, with flat type towers installed at each end of the transmission line to incorporate a shield wire.

Taking advantage of the delta towers' narrower space requirements, the transmission line design has shifted the alignment within the existing right-of-way to allow construction of the majority of the foundations for both 500 kV transmission lines while the existing 138 kV transmission lines remain energized. This reduces the construction duration and the overall transmission line footprint.



Site C and Peace Canyon substations



A new Site C substation will be constructed near the Site C dam on the south side of the Peace River. The substation will connect the power feed from the Site C generating station to the new 500 kV lines and the supply to Fort St. John and Taylor.

The existing 500 kV switchyard at Peace Canyon will also be expanded to facilitate the interconnection of the Site C generating station to the BC Hydro transmission system.

What to expect

- There will be increased vehicle traffic on the south side of the Peace River in and around the transmission line right-of-way, as the right-of-way is cleared and the transmission lines are constructed.
- Delays and/or temporary access restrictions may occur on existing access roads while upgrade work is in progress.
- There will be helicopters in the area while the conductors are strung.
- Disturbances could occur in relation to hunting and trapping activities.
- To ensure the safety of the public and BC Hydro crews, please watch for signs that indicate active work areas and do not hunt or shoot in areas where construction crews could be working.