

SITE C PROJECT CONSTRUCTION

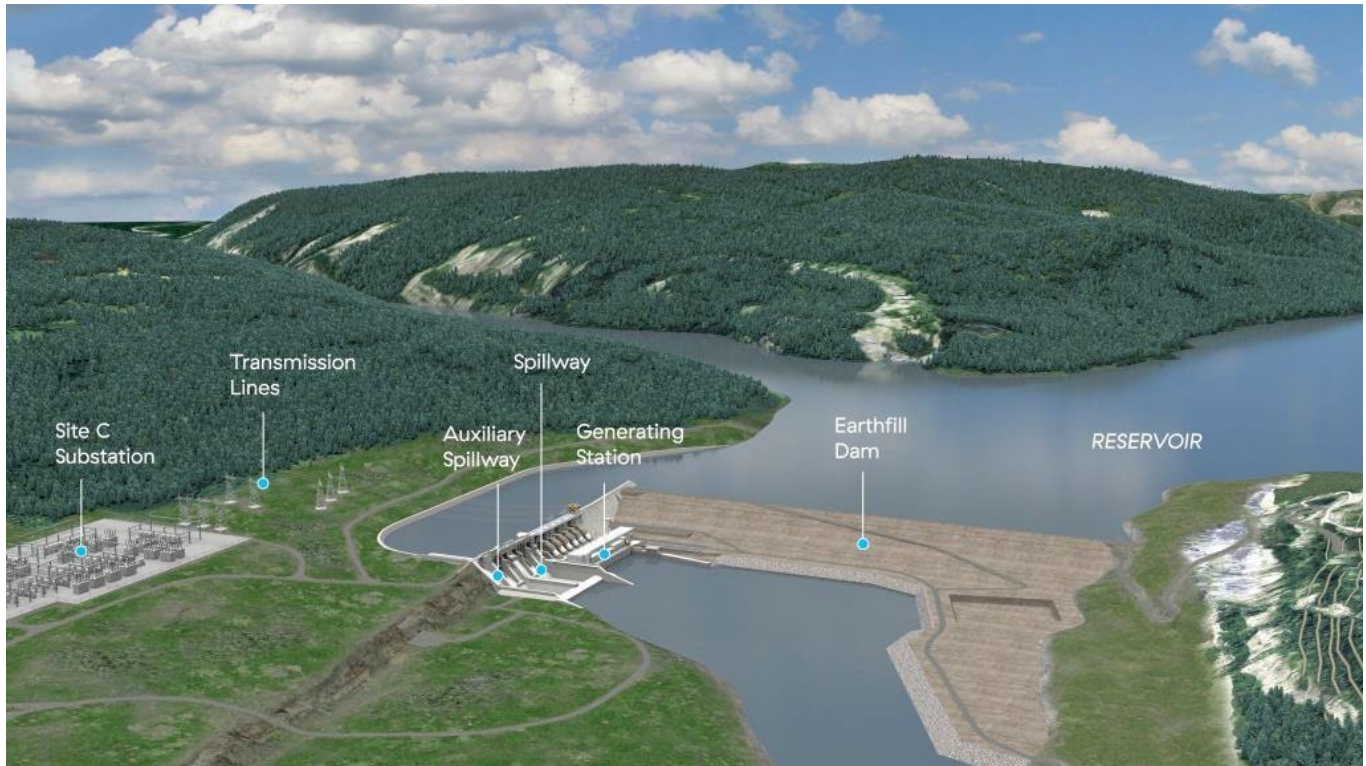
DAM, GENERATING STATION AND SPILLWAYS

The most significant component of the Site C project is the construction of the dam, generating station and spillways on the south bank of the Peace River. This work includes the following activities:

- Building temporary cofferdams and two diversion tunnels.
- Building an 800-metre-long roller-compacted concrete buttress.
- Building an earthfill dam approximately 1,050 metres long and 60 metres high above the riverbed.
- Building a generating station and spillways.
- Installing six 183-megawatt generating units.

Anticipated timeline

- 2016 to 2024



Steps to building the Site C dam

Early works

Construction of the dam, generating station and spillways started with the clearing of the dam site area and the construction of access roads. A temporary bridge was built for construction access across the river and slope flattening has been completed to stabilize the steep north bank above the dam site.

Cofferdams

Cofferdams have been built on the north and south banks to confine the river to its main channel, allowing for construction activities on each side of the river on dry land.

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Roller-compacted concrete buttress

Following completion of the south bank cofferdam, work began on a large roller-compacted concrete buttress that will support the valley wall and provide the foundation for the generating station and spillways — improving stability and providing seismic protection.

Once complete, the buttress will be approximately 800 metres in length and up to 70 metres high. It will be made up of about two million cubic metres of roller-compacted concrete that was placed, compacted, and cured in successive horizontal layers. The aggregate materials (rock) used for creating the roller-compacted concrete and conventional-vibrated concrete mixtures are sourced from the dam site and other areas. The roller-compacted concrete is created at the on-site batch plant.

Earthfill dam, generating station and spillways

Construction of the north and south portions of the earthfill dam and the generating station are built after the roller-compacted concrete buttress is complete.

Larger upstream and downstream cofferdams have been built to redirect the river through two river diversion tunnels, allowing a dry construction area to build the central portion of the earthfill dam.

The construction of spillways will allow the passage of large volumes of water from the reservoir into the river channel downstream. In addition, an auxiliary spillway will allow water to pass safely in the unlikely event of power loss.

An approach channel is being built to bring water from the reservoir to the penstocks. The penstocks will lead to six turbines and generators that will be installed and connected to the substation once the generating station is built.

Once the earthfill dam, power intakes and spillways are completed, the reservoir will be filled over a period of approximately four months.

Additional information

- There will be some noise, vibration, and dust in the vicinity of the dam site. There will also be increased vehicle traffic accessing the project site.
- We've implemented mitigation measures to reduce construction-related impacts on residents, such as dust-control measures and traffic management.
- To ensure public and worker safety during construction, the Peace River at the Site C dam site has been permanently closed to boaters.



The south valley wall under the dam, the generating station and ancillary structures, and the spillways will be reinforced with a long concrete buttress to improve foundation stability and seismic protection.