DAM, GENERATING STATION AND SPILLWAYS

The most significant component of the Site C project will be the construction of the dam, generating station and spillways. This work will include the following activities:

- Constructing temporary cofferdams and two diversion tunnels
- Building an 800-metre-long roller-compacted-concrete buttress
- Constructing 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

Construction of the dam, generating station and spillways will start with the clearing of the dam site area and the construction of access roads (see Information Sheet on Site Preparation for more detail). A temporary bridge will be built for construction access across the river and slope flattening will take place to stabilize the steep north bank above the dam site.

Cofferdams on the north and south banks will be built to confine the river to its main channel, allowing for construction activities on each side of the river to begin on dry land. Following completion of the south bank cofferdam, work will begin on a large concrete buttress that will support the valley wall and provide a foundation for the generating station and spillways — improving stability and providing seismic protection.

Construction of the north and south portions of the earthfill dam will then begin, along with the generating station, which will be constructed on top of the completed segment of the concrete buttress.

-more-

Larger upstream and downstream cofferdams will be 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 a spillway 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.

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.

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

Once the earthfill dam, power intakes and spillways are completed, and following the clearing of the reservoir area, the reservoir will be filled over a period of approximately three months (see Information Sheet on Peace River / Reservoir Area for more detail).

Finally, the first turbine and generator will be connected to the substation and will start producing electricity, with the remaining five units coming into service in the following year.

Additional Information

- Some noise, vibration and dust will occur in the vicinity of the dam site. There will also be increased vehicle traffic accessing the project site.
- BC Hydro and its contractors will be implementing 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 will be permanently closed to boaters when in-river construction progresses to a point that requires the closure.