

# TRANSPORTATION

## VOLUME 4, SECTION 31

The Environmental Impact Statement (EIS) details the environmental assessment undertaken for the Site C Clean Energy project. The EIS includes the project rationale, identifies potential effects and proposes measures to avoid or mitigate these effects. The EIS also describes the benefits Site C would provide for customers, Aboriginal groups, northern communities and the province as a whole.

### ABOUT THE ASSESSMENT

The transportation system supports road, rail, and air travel. During construction, the project would use existing roads and railways, or would develop new roads to move people, equipment, goods, and materials to and from construction and operational sites, potentially creating traffic delays and affecting road safety.

The transportation assessment considers potential effects of the project on changes in:

- local road traffic volumes
- road safety during construction, due to increases in traffic volumes, and upgrades to roads
- road safety during operations, due to potential change in fog hours on roads
- use of the airport
- rail use

### ASSESSMENT AREA

The local assessment area for transportation is the road and rail networks within the project activity zone, including the surrounding road networks that would be used during construction, and the segment of Highway 97 between Taylor and Dawson Creek. The assessment area includes the North Peace Regional Airport.

The regional assessment area comprises the Peace River Regional District and its major road networks. Other projects and activities within this larger area would use many of the same major road networks as the project.

### SUMMARY OF POTENTIAL EFFECTS AND MITIGATION MEASURES

POTENTIAL EFFECTS	KEY MITIGATION MEASURES
<p>Minor traffic delays</p> <p>Decline in level of service on some roads and at some intersections</p> <p>Potential for impeded access to and egress from properties on some</p>	<p><b>Highway 29 North</b></p> <ul style="list-style-type: none"> <li>• Implement Traffic Management Plans, including Traffic Control Plans, Public Information Plans, Incident Plans, and Implementation Plans</li> <li>• Realign Highway 29, incorporating improvements for sections of the highway that would be inundated by the reservoir between Hudson's Hope and Bear Flat</li> <li>• Construct a paved brake check on Canyon Drive west of Hudson's Hope before the start of the 10% grade, and make it a mandatory requirement for</li> </ul>

POTENTIAL EFFECTS	KEY MITIGATION MEASURES
<p>roads</p> <p>Small increase in collision frequency due to increase traffic on some routes</p> <p>Lower collision frequency due to permanent road upgrades on some routes</p> <p>Potentially higher accident rate due to poor visibility caused by fog during operations</p> <p>Improved road safety on some routes due to permanent road upgrades</p>	<p>Project-related trucks to stop and check vehicle brakes</p> <ul style="list-style-type: none"> <li>• Explore opportunities for constructing, and install if feasible, either arrestor beds or runaway lanes, or both, on Canyon Drive above Hudson's Hope</li> </ul> <p><b>Jackfish Lake Road</b></p> <ul style="list-style-type: none"> <li>• Provide a shuttle service between Chetwynd and the project site, based on demand. Work with the District of Chetwynd to identify suitable parking locations for workers using shuttles</li> <li>• Equip project vehicles travelling on the Project access road with radios</li> <li>• Control access to the project access road at the north end of Jackfish Lake Road</li> <li>• Strengthen the road base and hard-surface 31 km of Jackfish Lake Road, widening where required</li> <li>• Examine the feasibility of widening the shoulders along the first 16 km of Jackfish Lake Road to meet current B.C. Ministry of Transportation and Infrastructure rural collector standards, potentially including two 1.5 m wide paved shoulders</li> </ul> <p><b>North Bank Roads</b></p> <ul style="list-style-type: none"> <li>• Implement a carpool program</li> <li>• Use a conveyor belt to transport materials from 85<sup>th</sup> Avenue Industrial Lands to dam site to avoid truck trips</li> <li>• Hard-surface 240 Road and the portion of 269 Road south of the intersection with 240 Road</li> <li>• Realign a portion of Old Fort Road south of 240 Road</li> <li>• Potentially widen shoulders or add a path on Old Fort Road between Highway 97 and the realigned segment, and between the end of the realigned segment and the gravel pit entrance at km 5.5</li> <li>• Widen shoulders or add a path on 271 Road between the Wuthrich Quarry and Highway 97</li> <li>• Conduct intersection lighting calculations to determine if illumination is warranted and then, in collaboration with the B.C. Ministry of Transportation and Infrastructure, consider installing intersection lighting</li> </ul> <p><b>Highway 97 North – Taylor Bridge And Approaches</b></p> <ul style="list-style-type: none"> <li>• Monitor Taylor Bridge and low-lying approaches for changes in fog hours or density during the early years of Project operations. If required, implement mitigation measures to reduce driver speed and fog-related collisions, and to maintain overall road safety by considering the following: <ul style="list-style-type: none"> <li>○ Illumination on Taylor Bridge and bridge approaches</li> <li>○ Changeable message signs which are visible in dense fog</li> <li>○ Radio broadcasts and other forms of public communication</li> </ul> </li> </ul>

## MONITORING AND FOLLOW-UP

Monitoring will be undertaken at several locations to determine if additional traffic management measures would be required, including:

- The intersection of Highway 29 and Canyon Drive, to confirm any traffic delays resulting from construction. Potential mitigation could include construction of a dedicated left-hand turn slot, or changing intersection priority by revising pavement markings and signing
- The signalized intersection of Highway 29 South and Highway 97 South in Chetwynd, to determine if traffic signal timing adjustments could reduce overall intersection delay during construction
- Highway 97 signalized intersections in Fort St. John, to investigate the benefit of adjusting traffic signal timings to reduce overall intersection delay during construction
- Local commuter road usage, to determine if local road use restrictions should be implemented, for example on project-related traffic using 269 Road between 240 Road and Highway 97
- Taylor Bridge and low-lying approaches (for fog conditions)

## KEY FINDINGS

- During construction, several routes would experience increases in traffic volumes and delays, resulting in an adverse effect on transportation. However, road safety levels within the local assessment area are expected to be within the normal variability of annual collision frequency. On some routes (Highway 29 North and Old Fort Road), implementation of mitigation measures and construction of road improvements are expected to improve road safety in the long term.
- No expected adverse effects are associated with rail use or use of the North Peace Regional Airport
- Long term benefits from road and highway infrastructure improvements will be accrued as part of the project.
- Adverse effects associated with traffic delay and road safety would be confined to the period of construction and mitigation measures would be applied to reduce the effects

## ABOUT THE SITE C CLEAN ENERGY PROJECT

Site C is a proposed third dam and hydroelectric generating station on the Peace River in northeast B.C. Site C would provide 1,100 megawatts (MW) of capacity, and produce about 5,100 gigawatt hours (GWh) of electricity each year – enough energy to power the equivalent of about 450,000 homes per year in B.C.

Site C is undergoing a cooperative environmental assessment by the Canadian Environmental Assessment Agency (CEA Agency) and the British Columbia Environmental Assessment Office (EAO). The environmental assessment process commenced in August 2011 and is anticipated to take approximately three years to complete.

**FOR MORE INFORMATION** visit [bchydro.com/sitec](http://bchydro.com/sitec)

PO Box 2218

Vancouver, B.C. V6B 3W2

Toll-free: 1 877 217 0777

Email: [sitec@bchydro.com](mailto:sitec@bchydro.com)

Fax: 604 695 5290

Community Consultation Offices

9948 100th Avenue

Fort St. John, B.C.

V1J 1Y5

The Pearkes Center

10801 Dudley Street

Hudson's Hope, B.C. V0C 1V0