

# Environmental Assessment Certificate #E14-02 Annual Compliance Report

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*Site C Clean Energy Project  
March 31, 2021*

**Site C Clean Energy Project**  
**Status of Compliance with the Conditions of the EAC #E14-02**  
**March 31, 2021**

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**Background**

The Site C Clean Energy Project (the Project) will be the third dam and generating station on the Peace River that will provide up to 1,100 megawatts (MW) of capacity and about 5,100 gigawatt hours (GWh) of energy each year to the province's integrated electricity system. On October 14, 2014, the BC Provincial Minister of Environment and Minister of Forests, Lands and Natural Resource Operations decided that the Project is in the public interest and that the benefits identified by the Project outweigh the risks of significant adverse environmental, social and heritage effects. The assessment leading to the conclusion noted that the effects of the Project will largely be mitigated through careful, comprehensive mitigation programs and ongoing monitoring during construction and operation.

On October 14, 2014, the Ministers issued Environmental Assessment Certificate (EAC) #E14-02 setting 77 conditions under which the Project can proceed. On May 27 and November 24, 2020, respectively, the Environmental Assessment Office issued two amendments to Schedule A of the EAC (Project Description). Table 1 provides a list of amendments that have been made to both Schedule A (Project Description) and Schedule B (List of Conditions) of the EAC since issuance.

EAC #14-02 requires that BC Hydro submit a report to "EAO Compliance and Enforcement staff on the status of compliance with the Conditions of this Certificate, and the conditions in Schedule B ... on or before March 31 in each year during construction and operation phases of the Project." The following report is being submitted in accordance with this requirement, covering the period January 1, 2020 to December 31, 2020.

**Summary of Compliance**

EAC #E14-02 now contains 79 conditions which comprise 617 unique requirements relating to the following areas:

- Aquatic Environment
- Fish and Fish Habitat
- Vegetation and Ecological Communities
- Wildlife Resources
- Current Use of Lands and Resources for Traditional Purposes
- Land and Resource Use
- Transportation
- Outdoor Recreation
- Community

- Human Health
- Heritage Resources
- Environmental Protections and Management
- Environmental Management Plans, Follow-up and Monitoring
- Dam Safety
- West Pine Haul Route Traffic Management
- Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation

BC Hydro has assessed compliance of conditions as a whole, as well as with the individual requirements of each condition. This assessment is based on evidence collected through a comprehensive compliance program which requires monitoring and reporting by contractors, an Independent Environmental Monitor, and BC Hydro.

#### Summary of Compliance with 79 Conditions:

- No conditions have been assessed as being in non-compliance
- **11** conditions have not yet required implementation – all of the requirements in these conditions are in planning stages and will be implemented at a future time, such as during reservoir filling or operations
- **68** conditions are underway and have been assessed as having requirements that are “in compliance” and are in various stages of implementation. The requirements in these conditions have either been completed, are ongoing, or are not yet required to have started, but are deemed in compliance

#### Summary of Compliance with 617 Requirements:

Table 2 summarizes the status of compliance with each of the requirements in the 79 conditions of EAC #E14-02. The table shows that the total 617 requirements are assessed as being in compliance.

#### **Summary of Inspections by EAO:**

BC Hydro was inspected by Regulatory Agencies multiple times during the reporting period, including eight inspections by the Environmental Assessment Office. These written inspection reports included 22 separate findings of non-compliance related to site specific and often isolated issues, such as missing spill trays, wildlife mitigation, erosion and sediment control, and waste management. BC Hydro responded to each finding of non-compliance, corrected the deficiency, and provided evidence of this correction to the Environmental Assessment Office.

#### **Summary of Inspections by BC Hydro:**

BC Hydro has developed an Active Compliance Management Tool (ACMT), to monitor, track and report on compliance with environmental conditions and commitments for the Project.

The ACMT includes a mobile inspection tool that provides geography-specific and theme-specific record of environmental compliance at site. In June 2017 BCH launched the ACMT on the Site C Project, enhancing the ability to share inspection results with contractors and driving environmental compliance.

Between January 1, 2020 to December 31, 2020 BC Hydro used the ACMT to inspect 36,732 inspection results against conditions of the Environmental Assessment Certificate #E14-02 (EAC), for the Site C Project. Of the 16 categories described in the EAC #E14-02, the ACMT currently inspects against the following 10 categories:

- Aquatic Environment
- Community
- Current Use of Land and Resources for Traditional Purposes
- Environmental Management Plans, Follow-up and Monitoring
- Fish and Fish Habitat
- Heritage Resources
- Human Health
- Transportation
- Vegetation and Ecological Communities
- Wildlife Resources

Table 3 details a summary of compliance and deficiencies, against EAC #E14-02, identified by BC Hydro using the ACMT from January 1, 2020 to December 31, 2020. From the 36,732 inspection results, BC Hydro was able to verify the compliance status against 88,345 EAC requirements. BC Hydro recorded compliance against 80,134 (91%) of these compliance statements and identified 8,211 (9%) deficiencies.

BC Hydro actively worked with its contractors to remedy these deficiencies. Most deficiencies are corrected when identified in the field, and some deficiencies are corrected following formal communication between BC Hydro and responsible contractors. As of December 31, 2020, 46 of the deficiencies identified between January 1, 2020 to December 31, 2020 were open.

**Table 1. List of Amendments to EAC #E14-02**

Amendment No.	Issued	Amendment to EAC #E14-02
1	March 12, 2018	<p>Amends Schedule A (Project Description) Sections 4.3.1, 4.3.1.4 and 4.3.1.5 of Schedule A regarding the design of the Generating Station and Spillway as follows:</p> <ul style="list-style-type: none"> <li>• The location of the transformers changed from the draft tube deck to upstream of the generator units on the transformer deck</li> <li>• the spillway design changed from seven gates to three radial gates and six low level outlets</li> <li>• the discharge capacity changed from 10,100 m<sup>3</sup>/s at the maximum normal reservoir level and 17,300 m<sup>3</sup>/s at the maximum flood level to 11,000 m<sup>3</sup>/s at the maximum normal reservoir level and 16,700 m<sup>3</sup>/s at the maximum flood level</li> </ul>
2	October 26, 2018	<p>Amends Schedule A (Project Description) Section 4.3.4.1 and Figure 4.32 of Schedule A to increase the length of the Halfway River Bridge from 305m up to 1,100m in length, eliminate the causeway, and increase the number of bridge piers up to 19.</p>
3	November 14, 2018	<p>Amends Schedule A (Project Description) Section 4.3.5.2.3 and 4.3.5.2.4, Table 4.7 and 4.9 of Schedule A to permit the use West Pine Quarry, in addition to Portage Mountain Quarry, as a source of excavated material for the construction of Highway 29 realignment, Hudson’s Hope shoreline protection, and areas along the reservoir requiring protection during reservoir filling.</p>
		<p>Amends Schedule B (Conditions) in response to Amendment #3 above to require that BC Hydro develop a Traffic Management Plan for the West Pine Quarry Haul Route, in consultation with Saulneau First nations, West Moberly First Nations, the District of Hudson’s Hope, the District of Chetwynd, and the Ministry of Transportation and Infrastructure.</p>
4	February 12, 2019	<p>Amends Schedule B Conditions #4 and #13 to maintain a 15 m machine free zone adjacent to watercourses during reservoir clearing, except where worker safety prohibits manual tree falling and vegetation removal methods and as addressed in a site-specific prescription prepared and endorsed by a QEP. The rationale for the safety exemption must be documented in the prescription.</p>

Amendment No.	Issued	Amendment to EAC #E14-02
5	December 13, 2019	Amends Schedule A (Project Description) Section 4.3.4.1, Table 4.5 to reflect a longer bridge and no causeway for the crossing of Highway 29 realignment at Cache Creek. Also amends the design of the overall alignment of this segment, per Figure 4.33 of the EAC.
		Amends Schedule B (Conditions) in response to Amendment #5 above to require that BC Hydro develop a Noise Monitoring Plan to assess potential vehicle traffic noise impacts from the Highway 29 realignment at Cache Creek to the sweat lodge (the receiver location) identified in the application to amend the Certificate. The plan must be developed in consultation with West Moberly First Nations.
6	December 13, 2019	Amends Schedule A (Project Description) Section 4.3.6, and subsections, to reflect the expansion of the worker accommodation to permit up to 2,400 workers during peak periods.
7	May 27, 2020	Amends Schedule A (Project Description) Section 4.3.4.1 and Figures 4.28-4.30 to modify the design of the Highway 29 realignment crossings of Farrell Creek, Dry Creek and Lynx Creek.
8	November 24, 2020	Amends Schedule A (Project Description) Section 4.3.5.2, Table 4.7, and Figure 4.11 to develop and use the Halfway River East Borrow Source.

**Table 2. Summary of Compliance with Requirements of EAC #E14-02 Conditions**

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "In Compliance"	# of Requirements "In Non-Compliance"
					(Completed or Ongoing)	
Aquatic Environment	Hydrology	1	11	11	0	0
	Fluvial Geomorphology and Sediment	1	17	0	17	0
	Water Quality	1	12	0	12	0
Fish and Fish Habitat	Fish and Fish Habitat	4	52	14	38	0
Vegetation and Ecological Communities	Vegetation and Ecological Communities	7	67	0	67	0
Wildlife Resources	Wildlife Resources	10	64	0	64	0
Current Use of Lands and Resources for Traditional Purposes	Current Use of Lands and Resources for Traditional Purposes	4	20	5	15	0
Land and Resource Use	Harvest of Fish and Wildlife	1	2	0	2	0
	Agriculture	2	25	0	25	0
	Other Resource Industries	3	13	6	7	0
Transportation	Transportation	4	41	0	41	0

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "In Compliance"	# of Requirements "In Non-Compliance"
					(Completed or Ongoing)	
<b>Outdoor Recreation and Tourism</b>	Outdoor Recreation and Tourism	3	15	3	12	0
<b>Community</b>	Community Infrastructure and Services	6	31	6	25	0
	Housing	2	18	0	18	0
	Regional Economic Development	6	34	1	33	0
<b>Human Health</b>	Potable and Recreational Water Quality	1	3	1	2	0
	Ambient Air Quality	1	11	0	11	0
	Noise and Vibration	2	14	1	13	0
	Methylmercury	1	13	12	1	0
<b>Heritage Resources</b>	Visual Resources	1	4	0	4	0
	Physical Heritage and Cultural Heritage	3	22	4	18	0
<b>Environmental Protection and Management</b>	GHG Monitoring	1	7	7	0	0

Area	Category	# of Conditions	Total # of Requirements	# of Future Requirements	# of Requirement "In Compliance"	# of Requirements "In Non-Compliance"
					(Completed or Ongoing)	
<b>Environmental Management Plans, Follow-up and Monitoring</b>	Environmental Management Plans, Follow-up and Monitoring	10	98	30	68	0
<b>Dam Safety</b>	Dam Safety	2	3	3	0	0
<b>West Pine Haul Route Traffic Management Plan</b>	West Pine Haul Route Traffic Management Plan	1	13	0	13	0
<b>Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation</b>	Highway 29 Realignment – Cache Creek Segment, Noise Monitoring and Mitigation	1	7	3	4	0
<b>TOTAL</b>		<b>79</b>	<b>617</b>	<b>107</b>	<b>510</b>	<b>0</b>

Table 3. ACMT results against EAC #E14-02 from January 1, 2020 to December 31, 2021.

Area	# of Inspection Results	# of Identified Compliance Results	# of Identified Partial Deficiency Results	# of Identified Deficiency Results	% of Compliance
<b>Aquatic Environment</b>	3,725	3,327	281	117	89%
<b>Community</b>	17,363	15,890	1,348	125	92%
<b>Current Use of Land and Resources for Traditional Purposes</b>	4	4	0	0	100%
<b>Environmental Management Plans, Follow-Up and Monitoring</b>	48,177	43,066	4,250	861	89%
<b>Fish and Habitat</b>	2,541	2,392	106	43	94%
<b>Heritage Resources</b>	388	368	16	4	95%
<b>Human Health</b>	4,178	4,126	40	12	99%
<b>Transportation</b>	89	84	2	3	94%
<b>Vegetation and Ecological Communities</b>	2,178	1,975	167	36	91%
<b>Wildlife Resources</b>	9,702	8,902	657	143	92%
<b>TOTAL</b>	<b>88,345</b>	<b>80,134</b>	<b>6,867</b>	<b>1,344</b>	<b>91%</b>

## Acronyms and Abbreviations

APUMP	Aboriginal Plan Use Mitigation Plan
CEAA	Canadian Environmental Assessment Act
CEMP	Construction Environmental Management Plan
CMHC	Canada Mortgage and Housing Corporation
CRMP	Cultural Resources Mitigation Plan
CSMP	Construction Safety Management Plan
DFO	Department of Fisheries and Oceans Canada
EAC	Environmental Assessment Certificate
EAO	Environmental Assessment Office
EPP	Environmental Protection Plan
FAHMFP	Fisheries and Aquatic Habitat Management Follow-up Program
FAHMP	Fisheries and Aquatic Habitat Management Plan
FLNR	Ministry of Forests, Lands, Natural Resource Operations and Rural Development
FNHA	First Nations Health Authority
GHG	Greenhouse Gas
HRMP	Heritage Resources Management Plan
IEM	Independent Environmental Monitor
IWMAMP	Invasive Weed Mitigation and Adaptive Management Plan
MOE	Ministry of Environment
MOTI	Ministry of Transportation and Infrastructure
MOU	Memorandum of Understanding
NHA	Northern Health Authority
OEMP	Operations Environmental Management Plan
OHWM	Ordinary High-Water Mark
PAG	Potentially Acid Generating
PRRD	Peace River Regional District
QEP	Qualified Environmental Professional
QP	Qualified Professional
SARA	Species at Risk Act
RAA	The Regional Assessment Area
RSEM	Relocated Surplus Excavated Material
RVMA	Riparian Vegetation Management Area
TSFA	Terrain Stability Field Assessments
TSS	Total Suspended Solids
TU	Treatment Unit
VCDMP	Vegetation Clearing and Debris Management Plan
VWMMP	Vegetation and Wildlife Mitigation and Monitoring Plan
VWTC	Vegetation and Wildlife Technical Committee
WHIMS	Workplace Hazardous Materials Information System