

## ENVIRONMENT AND SOCIO-ECONOMIC

### Climate and Greenhouse Gas Emissions

**Report:** 22. Preliminary GHG Emissions Estimate from Construction Materials – Site C Hydro Project

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**Summary:** As part of the Stage 2 Baseline Greenhouse Gas emissions report, a preliminary inventory of construction activities and related fuel and electricity consumption rates was developed. The purpose of this memorandum was to report results from a subsequent calculation of emissions associated with construction materials that were not included in the preliminary study, and to provide low and high emissions ranges for each material based on material allowance and contingencies. Updated low and high emissions ranges for fuel and electricity were also estimated.

The results of the estimate suggest that construction emissions, including emissions from fuel and electricity consumption as well as those embodied in construction materials, would range from approximately 743,230 tonnes GHG to approximately 1,081,149 tonnes GHG. Corresponding emissions intensities, for the production of an average of 4,600 GWh per year, are 1.62 tonnes CO<sub>2</sub>e/GWh to 2.35 tonnes CO<sub>2</sub>e/GWh. This estimate revises the emissions estimates from the Stage 2 Baseline Greenhouse Gas Estimate up to a total of approximately 5 million tonnes of GHG, and a corresponding emissions intensity of between 10.6 and 11.4 tonnes GHG/GWh. This estimate is within the range expected for renewable generation technologies, such as wind.