

# First Cobalt

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11:10 29 Oct 2020

## First Cobalt releases results of a life cycle assessment affirming the low carbon footprint of its Canadian refinery

First Cobalt Corp. (CVE:FCC) (OTCQX:FTSSF) has released the results of a life cycle assessment (LCA) affirming the low carbon footprint of its Canadian Refinery, demonstrating its commitment to fighting climate change.

The report concludes that the environmental impacts associated with refining cobalt at First Cobalt's facility will be materially lower than the published impacts of a leading Chinese refiner. The report is being released in its entirety to demonstrate transparency and a commitment to industry-leading ESG practices.

### READ: First Cobalt kicks off geophysical survey at Idaho cobalt project

In a statement, Trent Mell, president & chief executive officer of First Cobalt, commented: "Electric vehicles are an important part of meeting global goals on climate change but consumers are demanding transparency on the environmental footprint of the EV lifecycle. Transparency across the entire supply chain is the best way to ensure that the EV revolution is also a green revolution.

"We are proud to share the results of a life cycle assessment of the First Cobalt Refinery process and we are committed to using these findings to improve our flowsheet to achieve even higher standards. Industry-leading ESG practices and environmental stewardship are important to us, as they are to our partners and our stakeholders."

The study assesses the life cycle impact of the production of 1 tonne of cobalt sulfate heptahydrate (CoSO<sub>4</sub> · 7H<sub>2</sub>O) converted from cobalt hydroxide. For comparative purposes, results from each category were benchmarked against a leading cobalt refinery in Tongxiang, China.

In four of six impact categories, the First Cobalt Refinery has a lower environmental impact: global warming potential, eutrophication potential, smog potential and freshwater consumption. For acidification potential the impact of the First Cobalt refinery is equal to the acidification potential of the Tongxiang refinery.

The one category where First Cobalt had a slightly higher impact was ozone depletion potential, where the values are 9% higher. This is primarily due to the use of sodium hydroxide during the solvent extraction process. The use of sodium hydroxide at the SX stage is a notable contributor for all impact categories and it is also a significant contributor with most of the world's cobalt refining operations. The company is studying alternatives to reduce sodium hydroxide consumption and will also seek to identify suppliers of minimum impact sodium hydroxide.

In 2012, the Cobalt Institute published an LCA study for eight cobalt operations, including processing from sites in Belgium, Canada, DRC, Finland, France, Japan and Zambia. The cobalt refining processes covered in this study are generally hydrometallurgical, similar to the First Cobalt Refinery. The Cobalt Institute covered three of the same impacts included in the First Cobalt LCA: global warming potential, eutrophication potential and acidification potential. Once again, the First Cobalt impacts across each of these categories rank favourably, underlining the Company's strong ESG

### 1 Year Share Price Graph



### Share Information

**Code:** FCC  
**Listing:** TSX-V  
**Sector:** Mining  
**Website:** [www.firstcobalt.com](http://www.firstcobalt.com)

### Company Synopsis:

First Cobalt owns North America's only permitted cobalt refinery. Cobalt refining is a critical component in the development and manufacturing of batteries for electric vehicles and forms a foundational piece of the next generation of the North American auto sector and other electrified consumer and industrial applications.

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potential.

An important competitive advantage for the First Cobalt Refinery is that its power is drawn from a hydroelectric grid, which is commonplace in Canada. Conversely, electricity from a Chinese grid is mainly coal-powered, which will have a higher global warming potential.

Freshwater is an environmental indicator rather than an impact category but it was deemed important for this assessment. Mining and refining processes often take place in water-stressed regions and the amount of water consumed in the process is frequently an important factor.

The LCA makes comparative assertions between First Cobalt's Refinery and Huayou Cobalt Refinery. To ensure that the LCA study is scientifically robust and in accordance with ISO 14040 and ISO 14044, Minviro included a third-party review from industry experts.

A primary objective of this study is to assist in project development and improvement with a secondary motivation to assist with strategic planning. The intended audience for this study is broad and includes parties across the cobalt value chain, both upstream and downstream.

The group said it is publishing the results because it believes it can enrich the discussion on ESG by sharing and clarifying important facts and figures about its intended operations. Through this process, it seeks active dialogue with all interested parties.

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The company also owns the Iron Creek cobalt project in Idaho, USA and controls significant silver and cobalt assets in the Canadian Cobalt Camp, including more than 50 past-producing mines.

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