

## **First Cobalt Releases Refinery Life Cycle Assessment**

*Carbon footprint 50% lower than benchmark cobalt facility*

TORONTO, ON — (October 29, 2020) – First Cobalt Corp. (TSX-V: FCC; OTCQX: FTSSF) (the “Company”) is demonstrating its commitment to fighting climate change by releasing results of a life cycle assessment (LCA) affirming the low carbon footprint of its Canadian Refinery. 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.

### **Highlights**

- In First Cobalt’s production process, the carbon footprint generated through the production of one kilogram of cobalt sulfate is 1.58 kg CO<sub>2</sub> eq compared to 3.25 kg CO<sub>2</sub> eq for a benchmark refinery in Tongxiang, China
- Impact of producing cobalt sulfate at First Cobalt’s Canadian refinery rather than through the existing supply chain is the equivalent of taking more than 9,000 combustion engines off the road every year
- First Cobalt Refinery has a lower environmental impact in four of six impact categories measured, is equal in one category and is slightly below in a final impact category
- LCA report provides a roadmap that will help First Cobalt further reduce site-level impacts before the refinery is commissioned
- Study was funded through a research grant provided by the National Research Council of Canada

Trent Mell, President & Chief Executive Officer, 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.”*

First Cobalt is committed to the sustainable production of cobalt for its essential role in the manufacturing of electric vehicles. The Company commissioned a gate-to-gate LCA of the First Cobalt Refinery across six areas of impact based on First Cobalt’s refinery expansion feasibility study. Minviro, a London-based consultancy that specializes in life cycle assessments, conducted the study. The intention of the LCA is to quantify and benchmark the potential environmental footprint of the operation and identify opportunities to reduce that footprint prior to the refinery’s expansion and recommissioning.

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.

<b>Impact per Kilogram of Cobalt Sulfate Produced</b>				
<b>Category</b>	<b>Measure</b>	<b>First Cobalt</b>	<b>Chinese Refiner</b>	<b>Impact Reduction</b>
Global Warming Potential	kg CO <sub>2</sub> eq.	1.58	3.25	51%
Eutrophication Potential	kg N eq.	0.0068	0.0097	30%
Smog Potential	kg particulate matter	1.4E <sup>-7</sup>	1.8E <sup>-7</sup>	22%
Acidification Potential	kg SO <sub>2</sub> eq.	0.022	0.022	0%
Ozone Depletion Potential	kg CFC-11 eq.	1.2E <sup>-6</sup>	1.1 E <sup>-6</sup>	-9%
Freshwater Consumption	kg water	3.38	12.5	73%

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 a 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 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.

First Cobalt is publishing the results because the Company 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. A copy of the LCA report can be accessed on our website at <https://www.firstcobalt.com/responsibility/life-cycle-assessment/>.

### **About First Cobalt**

First Cobalt owns North America's only permitted cobalt refinery. Cobalt refining is a critical component to 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. First Cobalt 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.

On behalf of First Cobalt Corp.

Trent Mell  
President & Chief Executive Officer

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