



SENATE STANDING COMMITTEE ON NATIONAL FINANCE- Bill C-69, Moving To “Yes,” with Clean Hydrogen and Clean Technology Manufacturing Investment Tax Credits

ISSUE

Canadian chemistry and plastics products are the nexus of all solutions to energy efficiency, net-zero emissions, and a circular economy. As we work to make these goals a reality the world will need more, not less, chemistry solutions. More than 95 per cent of all manufactured products rely on chemistry and there is a growing global demand for chemicals and plastic resins with the lowest carbon production available. Decarbonizing chemistry sector production and the downstream supply chain will require significant investment in existing production facilities. Our sector will need to attract hundreds of billions of dollars of new investments in the coming decades to modernize and or build new facilities to meet growing global and domestic demand. Other jurisdictions are moving aggressively to attract investment. Bill C-69 is the second Act to put Investment Tax Credits (ITCs) in place this time for Clean Hydrogen (Clean H₂) and for Clean Technology Manufacturing. We need to see these credits passed into law so we can put private capital and Canadians to work.

There are five pathways to transition the global chemistry industry to low carbon including:

- Carbon Capture, Utilization and Storage;
- Hydrogen;
- Electrification;
- Feedstock switching to lower carbon resources, including biomass; and
- Building circularity for our downstream products. Essentially avoiding production through post-consumer product recovery and reformulation.

Canada is one of two regions globally capable of leveraging all these pathways to support the chemistry and plastic sector transformation. Carbon capture, utilization and storage is a very important component of our low emissions future. We are tracking seven proposed investments that will produce low emissions hydrogen or hydrogen carrier products like ammonia, and perhaps in the future methanol production, worth tens of billions of dollars. This past November Dow Chemical announced one of the largest ever investments in Canada's chemical sector utilizing carbon capture. Bill C-69 is a crucial piece of legislation that will strengthen the case for more investment in these technologies. Chemistry is also key enabler to other sectors and the Canadian economy generally in achieving net zero aspirations.¹ This point is critical; chemistry is required to manufacture downstream low carbon goods. 95 % of manufactured products are touched by chemistry and this includes critical minerals necessary for the low carbon transition. It is essential that the Clean Technology Manufacturing Tax credit be extended to chemistry products that enable clean manufacturing, especially for critical mineral processing.

CONTEXT – CHEMISTRY IS CRITICAL TO CANADIAN ECONOMY

Canada's \$73 billion chemical manufacturing industry is a significant contributor to our country's economy. The sector is directly responsible for 91,000 jobs and pays more than \$6.6 billion in salary and wages. Primarily concentrated in Alberta, Ontario and Quebec, the industry supports an additional 392,500 jobs in the overall economy across the country.

- Chemistry is 4th in value of shipments behind transportation equipment, food, and refined energy products.

¹ Decarbonizing the Canadian Chemical and Fertilizer Industry, Clean Energy Canada. March 2023.

- 3rd in value-added manufacturing output.
- The Chemistry sector pays nearly \$7 billion in wages annually and the Industrial Chemistry sector pays some of the highest manufacturing wages in Canada at \$98,760 on average in the most recent year.

A COMPETITIVE REGULATORY AND POLICY LANDSCAPE FOR INVESTMENT

Policy actions should **avoid stranding previous investments** in emissions reductions that generate capital, credits, or offsets.

- Investors need to be sure that emissions reduction investments will remain economically and financially viable for decades after construction and are not rendered irrelevant by quickly changing regulations.

Ensuring investment attraction **programs are long-lived** and are available to investors for at least 10 years once finalized. Capital planning and construction cycles for significant chemistry and plastics projects can take seven to ten years and policy certainty across that time horizon is critical.

Utilizing Canada’s tax code to **increase transparency, program access and uptake by private sector capital.**

- Newly developed ITC incentives should be technology agnostic as long as these investments reduce emissions.
- Tax measures should be outcome-based with clear eligibility criteria providing predictability and certainty.
- The proposed ITCs for Carbon Capture Utilization and Storage and Clean Hydrogen have numerous federal Ministerial approval processes imbedded in their operation. This level of political decision-making erodes certainty for investors.

Comments on Bill C-69: Clean Hydrogen and Ammonia Investment Tax Credit.

Eligible Equipment, Apportionment, Carrier Pathways and Government Deliverability Standards for Clean H₂ Projects

Context

The clean hydrogen sector is still in the early stages of adoption in the chemical sector globally. Industrial scale Clean H₂ production faces headwinds such as high capital costs, high costs associated with retrofitting established industrial sites, higher operating costs lasting decades, complex or a lack of regulatory frameworks in some jurisdictions, and the complexity of transporting and storing hydrogen and hydrogen carriers. CIAC believes that the proposed Clean H₂ ITC addresses many of these issues and will strengthen the business case for clean hydrogen investment in Canada.

Recommendations

- We were pleased to see a broad approach applied to eligible equipment inclusions and has now included a few more areas specific to start up and commissioning that have made the credit stronger.
 - We are disappointed that expenditures for offsite transportation and distribution of ammonia and hydrogen were not included in the eligible equipment definitions, and we recommend the credit be broadened to include these measures. Tank cars and the associated rail infrastructure often function as temporary storage and are required for the site to function for longer than a few hours if disruptions to transportation networks occur.
- We were pleased to see the technology pathways broadened from “reforming,” in the draft legislation to “reforming or partial oxidation of eligible hydrocarbons,” as this is a more inclusive definition and will allow companies greater technological choice to generate low carbon intensity hydrogen.

- The legislation has modified the requirements for dual use heat and power units and is proposing a threshold of “greater than 50 percent,” of heat or power in CCUS and clean hydrogen projects over the first twenty years of operation. While this is a welcome development we still believe the 50 percent threshold is unnecessary and that an apportionment approach for power or heat used is best suited for the ITC. Additional clarity on how to attribute equipment that may be used for a clean hydrogen project that uses carbon capture would also be welcomed.
- Purchase Agreements (PAs) for electricity and renewable natural gas should not require a sole purpose designation to be considered eligible. Apportionment is used throughout the ITC for eligible and ineligible costs and it should be utilized for PAs when electricity or RNG is used in several processes on site.
 - We recommend indirect accounting with connectivity, similar to power purchase agreements for electricity.
- We recommend the government add methanol as a clean hydrogen pathway along with ammonia.
- We recommend federal officials work closely with provincial regulatory authorities and to be cognizant that the start up and early operations phases for new technologies can be challenging. We want to avoid unnecessary administrative burden and avoid penalizing companies for perfectly normal issues that affect all new industrial facilities when they enter the operations phase.
- We encourage the government to at a minimum introduce delivery standards into the Ministerial approval processes that are in the legislation. Clearly legislated timelines for review processes and approvals can help to provide investor certainty.
- The updates to the legislation still do not address the GoC ability to make a redetermination of the carbon intensity of the hydrogen produced. We recommend specific criteria be set for the redetermination of the carbon intensity to be used by the Minister.

Comments on Bill C-69: Clean Technology Manufacturing Investment Tax Credit

Context

The proposed legislation does not reflect the critical role of chemistry in turning critical mineral ores into value added products for downstream manufacturing. Critical mineral processing and recycling requires a robust chemical supply chain to meet demand and stay competitive with competition abroad. Specialty chemistry is the enabler for critical mineral separation, processing, and battery recycling. Focusing solely on the supply of ore fails to take a holistic view of the supply chain and the geopolitical vulnerabilities at play. If a facility is built and lacks a domestic source of mineral processing chemistries, the entire supply chain is still captive to foreign influence.

Recommendation (highlight is a new addition)

“qualifying mineral activity” means

- (a) the extraction of resources from a mineral deposit or from a tailing pond;
- (b) a mineral processing activity, including crushing, grinding, milling, separation, sieving, screening, froth floatation, leaching, recrystallization, precipitation, drying, evaporation, heating, calcinating, roasting, smelting, casting of ingots, refining, purification, distillation, electrodeposition and surface roughening of electrodeposited foil, that
 - (i) is performed at a mine site, well site, tailing pond, mill, smelter or refinery, and
 - (ii) occurs prior to or as part of a process intended
 - (A) to increase the purity of at least one qualifying material, or
 - (B) to produce a material with non-trace amounts of a single qualifying material, and without non-trace amounts of any elements other than permitted elements;
- (c) a recycling activity that is
 - (i) sorting, disassembly or shredding of a recyclable material, or

- (ii) a material processing activity substantially similar to an activity described in paragraph (b);
 - (d) a synthetic graphite activity that is
 - (i) performed during or after the graphitization stage, and
 - (ii) a material processing activity substantially similar to an activity described in paragraph (b); or
 - (e) spheronization of graphite or coating of spheronized graphite.
 - (f) manufacturing of chemical substances necessary for the activity described in paragraphs (a), (b) or (c).
- (activité minière admissible)*”

This recommendation is complementary to the Strategic Innovation Fund and the Mines to Mobility initiative to build a sustainable battery innovation and industrial ecosystem in Canada. CIAC members are actively considering investment in critical minerals chemistry in Canada and strong investment incentives will be crucial in turning these plans into reality.

Conclusion

We welcome the opportunity to provide our thoughts and recommendations to FINA on Bill C-69. Low emissions hydrogen and hydrogen carriers are crucial technology for lowering emissions in the chemistry sector and for helping other sectors lower their own emissions. Bill C-69 contains many strong elements that will help unlock private investment in Canada’s chemistry sector. Policy makers need to ensure federal departments are ready to review and approve projects and the government needs to be cognizant that a tax credit is about incenting investment. The Clean Technology Manufacturing Investment tax credit is missing the critical role that chemistry plays in turning critical minerals into usable products and our recommendation will help close that gap. We would be pleased to meet with you to discuss our recommendations.