

Written Submission for the Pre-Budget Consultations in Advance of the 2024 Budget

By: The Canadian Hydrogen and Fuel Cell Association

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Summary of Recommendations for the Government of Canada

Recommendation 1: That the Government of Canada establishes a “Canadian hydrogen office” dedicated to the implementation of Canada’s hydrogen sector.

Recommendation 2: That the Government of Canada dedicate funding to the development of Canada’s hydrogen sector as well as supporting industries.

Recommendation 3: That the Government of Canada ensures the timely and effective implementation of tax measures to support Canada’s hydrogen industry.

Recommendation 4: That the Government of Canada accelerate activities to streamline Canada’s regulatory processes and look to best practice jurisdictions to align regulations and standards for industry while also respecting the rights of Indigenous persons in Canada.

Recommendation 5: That the Government of Canada develop measures that enable an increase in hydrogen demand.

About the Canadian Hydrogen and Fuel Cell Association

The Canadian Hydrogen and Fuel Cell Association is the national voice for the hydrogen and fuel cell sector in Canada. As an industry association representing over 180 companies across all stages of Canada's hydrogen and fuel cell supply chain, our goal is to ensure that Canada remains groundbreaking. Each of our member companies are ready to bring their technologies, research, project developments and workers to the forefront of Canada's innovation and decarbonization efforts.

Canada has always been on the cutting edge of the global hydrogen industry – from the creation of the first electrolysis technologies over a century ago, to development of a fuel cell cluster in British Columbia, with companies that export their products to 42 countries, which account for 65% of the world's population. The world is currently at an inflection point as it relates to the reduction of greenhouse gas (GHG) emissions and requires solutions to slow down and stop the effect of GHG emissions on the environment. Despite our past leadership, this turning point requires calculated but rapid responses.

Hydrogen is expected to play a key role in enabling Canada to meet its climate targets and global commitments. To develop Canada's hydrogen industry to enable its achievement of national carbon reduction targets, including the government's 2025 hydrogen export targets, 2030 emissions reduction targets and 2035 transportation decarbonization targets, further direct support for the sector is essential.

Recommendation 1: That the Government of Canada establishes a “Canadian hydrogen office” dedicated to the implementation of Canada’s hydrogen sector.

The federal government, by way of recent policy, is signalling that Canada has a role to play in the global hydrogen economy. By nature of the enormous breadth of industry that hydrogen covers, many departments – including energy and resources, transport, climate, innovation, labour, infrastructure, trade, and finance – have been engaged on advancing a piece of Canada's hydrogen industry. However, much of this work is happening in a silo and industry itself is often left coordinating activities across government departments and offices.

The production, transportation, storage, and distribution of hydrogen are interconnected. Production depends on upstream technologies and access to feedstocks. Export requires safe hydrogen transportation across Canada. Developing hydrogen fuel cell vehicles relies on fuelling infrastructure. Advancing innovative technology needs skilled labor and expertise. These elements form the backbone of progress and industry growth, and the coordination of these elements could be accommodated at an established “Hydrogen Office.”

The creation of a Canada Hydrogen Office would help in coordinating the development of Canada's hydrogen sector. This office would increase efficiency of program management and delivery by coordinating departmental efforts to look at all aspects of a hydrogen project including upstream, production, and downstream elements with greater oversight. Such window could be the clearing house for all projects across governments, helping businesses navigate regulatory and programming channels and to move the needle on advancing new projects.

The overarching goal of the Canada Hydrogen Office would be to enable and track Canada's clean energy transition by **developing hydrogen projects** that provide an optimal solution, including metrics such as cost per tonnes of GHG reductions, and from resiliency and energy security perspectives. Hydrogen has a role to play as a feedstock into other chemical processes, including the development of fertilizers, synthetic fuels, and as a gas/liquid for fueling purposes, among others. A molecular solution with a clean

footprint is needed for these areas that aren't possible to electrify. We can look to Germany and the US as precedents for this initiative:

- The German National Hydrogen Council [Nationaler Wasserstoffrat, NWR] assists and advises the State Secretaries' Committee on Hydrogen, while the Hydrogen Coordination Office [Leitstelle Wasserstoff] is responsible for the implementation and further development of the German National Hydrogen Strategy.¹
- The US Department of Energy has launched the Hydrogen and Fuel Cell Technologies Office (HFTO) focusing on research, development, and demonstration of hydrogen and fuel cell technologies across multiple sectors enabling innovation, a strong domestic economy, and a clean, equitable energy future.²

Just like the Government of Canada, both countries have made very clear statements regarding their support for the hydrogen sector, and their intent to become major players in the space.

Recommendation 2: That the Government of Canada dedicate funding to the development of Canada's hydrogen, and supporting, industries.

Over the past few years, appetite for the development of major clean energy projects has increased significantly across Canada's private and public sectors, spurred by the need to decarbonize at a pace and scale necessary to meet global and domestic climate targets. Funding for innovative projects, including some of Canada's keystone hydrogen projects, through programs like the Net Zero Accelerator and the Clean Fuels Fund have assisted in spurring domestic hydrogen activity and innovation.

These existing funding programs are valuable vehicles to support Canada's industrial decarbonization but can be inaccessible to emerging industries and industries made up of several small and medium-sized enterprises – akin to those in Canada's hydrogen sector. Many organizations have found these funding programs to be complex, onerous, and resource-intensive, deterring applications from some of the most innovative technologies and project developers.

Dedicated funding for hydrogen may not require the creation of new funding entities. This could be achieved by, for example, recapitalizing the SIF and CFF funds – and any upcoming funding initiatives – with a dedicated hydrogen allocation.

If Canada is going to meet its commitment to export clean hydrogen by 2025, we recommend that the government explore dedicating a portion of existing clean energy funding programs towards advancing Canada's hydrogen industry. This would assist in leveling the playing field of applications for smaller producers and normalize competition between the nascent hydrogen industry and more established ones. Alternatively, as we understand the demand already placed on the teams implementing existing funding programs, we would support the development of a new funding program designed to advance Canada's hydrogen sector.

Recommendation 3: That the Government of Canada ensure the timely and effective implementation of tax measures to support Canada's hydrogen industry.

In response to the United States' *Inflation Reduction Act* (IRA), Canada's federal government has unveiled a suite of investment tax credits (ITCs) meant to spur the growth of Canada's clean technology and clean

energy industries. This portfolio of ITCs includes those directed at carbon capture, utilization and storage, clean technologies, and most pressing to Canada’s hydrogen sector, clean hydrogen.

Though there are still modifications to be made to the ITCs, we strongly urge with the full recommendation of our members that the federal government does not delay with tabling implementation legislation, particularly with regards to the Clean Hydrogen ITC, which promises a refundable tax credit of up to 40 per cent for the lowest emitting hydrogen produced. Provided that the ITCs effectively offer support to all existing and emerging hydrogen production pathways – including but not limited to natural gas coupled with carbon capture and sequestration, grid connected electrolysis, methane pyrolysis and by-product hydrogen – they will help level the playing field with our US counterparts and boost Canadian competitiveness. Delays in the formal legislation of these measures create doubts in the minds of investors and project proponents who are also exploring other, more advanced jurisdictions in which to make their investments.

The US has been a first mover in developing an ITC, which allows Canada to take lessons from IRA and develop a system with simpler yet effective rules that can be faster to deploy. An example where Canada can look at lessons learned from IRA is the topic of additionality and temporal matching rules, and their impact in the incentives. We recommend that the federal government table implementation legislation as soon as possible, to take full advantage of the innovation and investment currently available in Canada’s clean hydrogen industry.³

In summary, it is crucial that instruments already announced but not yet deployed – the Clean Hydrogen ITC, other ITCs, and the Canada Growth Fund initiatives such as Contracts for Difference – be deployed swiftly and effectively so they meet the intended impact in attracting investment to Canada and enabling the scaleup of the sector.

Recommendation 4: That the Government of Canada accelerate activities to streamline Canada’s regulatory processes and look to best practice jurisdictions to align regulations and standards for industry while also respecting the rights of Indigenous persons in Canada.

As was committed to in previous financial documents, the federal government has been exploring avenues to accelerate and streamline Canada’s regulatory processes. This work is essential to the development of future large-scale industrial hydrogen and, in general, clean energy projects. In this effort, we encourage the federal government to explore potential avenues and pathways to effectively streamline regulatory processes to ensure that domestic centric clean energy projects are built apace and encourage the pursuit of alignment with regulatory requirements and standards in key jurisdictions, like the United States, European Union, and Indo-Pacific region, to ensure the swift export of Canadian hydrogen products and boost reciprocal trade.

Furthermore, it is important to find the right balance between streamlining processes and duly consulting Indigenous communities. Many hydrogen project developers in Canada are in partnership with Indigenous communities to develop their projects, and therefore, Indigenous consultation is a critical component to project development. In turn, we encourage the Government of Canada to continue supporting Indigenous peoples in their pursuit of self-determination and meaningful reconciliation. Similarly, we encourage the inclusion of Indigenous communities in support of clean energy developments that provide an opportunity to advance reconciliation through clean energy infrastructure development.

Recommendation 5: That the Government of Canada develop measures that enable the increase in hydrogen demand.

There are not many initiatives that currently support the “demand side” of hydrogen. Demand-side initiatives that include supporting hydrogen offtake and increasing the requirements from the industrial sector to decarbonize will considerably speed up the scaleup of the sector. One example of a mandate that would increase demand for clean hydrogen is the creation of a National Renewable Gas mandate of 5 – 7 per cent for natural gas pipeline blending would rapidly expand the clean hydrogen economy while reducing overall emissions from space heating and industrial processes.

Exploring new policies and initiatives is particularly critical, as hydrogen proponents in the supply and demand side of the market are seeking policy mechanisms and incentives, which can de-risk early investment to help reduce costs of production and spur harmonized build-out of supply and demand. Certainty and predictability of these mechanisms can prove attractive and provide Canada with a competitive advantage to attract early-stage investment.

In the next phase of Canada’s Hydrogen Strategy and having proven over the past two years what the sector can accomplish with limited dollars deployed – considering that the ITCs and CGF are not active yet – it would be crucial to see the Government of Canada adopt and encourage solutions that promote hydrogen. Government as an adopter of hydrogen solutions will send an unequivocally strong signal to industry and investors that Canada is serious about developing the industry.

¹ <https://www.wasserstoffrat.de/en/>

² <https://www.energy.gov/eere/fuelcells/hydrogen-and-fuel-cell-technologies-office>

³ [The Road to Clean Hydrogen - Getting the Rules Right \(plugpower.com\)](#)