Written Submission for the Pre-Budget Consultations in Advance of the 2023 Budget

By: The Canadian Hydrogen and Fuel Cell Association

Summary of Recommendations

Recommendation 1: That the government pursue a tax credit for clean hydrogen in line with credits provided under the United States' 45V Production Tax Credit

Recommendation 2: That the government speed up the application and approval process for Canadian programs such as the Strategic Innovation Fund and Clean Fuels Fund, and that it follows a one-window approach for all funding and regulatory/permitting inquiries

Recommendation 3: That the government provide resources to accelerate the development of hydrogen hubs and corridors and other recommendations of the Hydrogen Strategy for Canada

Recommendation 4: That the government work with provincial governments, utilities, and other energy providers to find creative ways to manage electricity costs for hydrogen production

Canada has always been at the forefront of the global hydrogen industry – from the creation of the first electrolysis technologies over a century ago to the launch of the largest fuel cell transit bus fleet in 2010. But from climate action to global security pressures, the world is at a turning point and Canada is falling behind.

The Canadian Hydrogen and Fuel Cell Association represents over 160 companies that span the hydrogen and fuel cell supply chain, all of which are ready to bring their technologies, workers, and industry to the forefront of Canada's energy conversation. But to do so, we need some support.

Recommendation 1: That the government pursue a tax credit for clean hydrogen in line with credits provided under the United States' 45V Production Tax Credit

In Budget 2022, the Government of Canada announced that they would provide details on the design of an investment tax credit (ITC) of up to 30 per cent, focused on net-zero technologies, battery storage solutions, and clean hydrogen, in the 2022 Fall Economic Statement.

Since that announcement, the United States federal government passed the *Inflation Reduction Act*, which established a 10-year production tax credit (PTC) for clean hydrogen ranging from $0.012 to $0.60 USD per kg, depending on the greenhouse gas intensity of hydrogen production. This funding then increases five-fold, to up to $3.00 USD per kg for operations that respect certain domestic wage and apprenticeship requirements. This is a significant incentive that can make clean hydrogen cost competitive with grey hydrogen – spurring adoption in processing and heating applications and helping clean hydrogen be cost competitive with diesel and gasoline for transportation.

The amount and simplicity of the U.S. PTC out-scales and out-paces the 30 per cent ITC proposed in Budget 2022, leaves Canadian industry behind. It also supports the vast opportunity for clean hydrogen in industrial processing and heating – areas that are not supported by Canada's Clean Fuel Standard credits. We ask that the government continue to look at global measures as potential opportunities for Canada to continue to show agile and effective leadership. Both an ITC (applicable to all project costs), and PTC are needed to advance the sector.

Recommendation 2: That the government speed up the application and approval process for Canadian programs such as the Strategic Innovation Fund and Clean Fuels Fund, and that it follows a one-window approach for all funding and regulatory/permitting inquiries

Canada's decarbonization journey is just beginning. Energy proponents and suppliers need a simplified and proactive window into government for solutions for our economy. National decarbonization policies and regulatory mechanisms to mitigate emissions are complex (and national in scope). Funding systems are not easily accessible, efficient, and not always clearly coupled with the legislation or regulatory mechanisms to decarbonize.

Over the past few years, the focus on funding for major clean energy projects has increased significantly in both government and private industry. Programs such the Strategic Innovation Fund (SIF) and Clean Fuels Fund (CFF) present great opportunities for Canada's climate and economic ambitions to be realised. However, the resource-intensive application process and the long waiting period for decisions, which has now surpassed a year for many, deters the rapidly growing industry from accessing needed funding, and especially smaller project proponents.

The Canadian Investment Bank (CIB) is a key institution in the provision of debt financing, and they also need to move quickly. Having access to low-interest debt provided by government, who also are more accepting of utilization risk than conventional lenders, is key to Canadian projects moving ahead.

These programs need to be appropriately resourced to speed-up the application process, reduce wait times and get action on what really matters – decarbonizing Canada.

CHFCA recommends a turn-around of six months to one year SIF, CFF, CIB, or any future funding envelopes. Furthermore, CFF funding should be renewed every year by the same level of funding for the duration of the energy transition.

Additionally, a "one window" approach for all regulatory permits and Government of Canada funding would accelerate Canada's decarbonization journey. Expansion of the existing Clean Growth Hub concept, and/or the creation of a "Canada Hydrogen Office" would be a practical way to move this idea forward. Such window could be the clearing house for all projects across governments, helping corporate clients navigate regulatory and programming channels and to move the needle on new projects.

This approach could be the key to centralizing of strategy development for decarbonization of certain sectors as outlined in the *Net-Zero Emissions Accountability Act*. A one window approach by government would increase efficiency of programming management and delivery by the responsible departments.

Recommendation 3: That the government provide resources to accelerate the development of hydrogen hubs and corridors and other recommendations of the Hydrogen Strategy for Canada

Released in December 2020, the government's *Hydrogen Strategy for Canada*, included the commitment to develop early deployment hubs for hydrogen in the country building to corridors by 2030. Since the strategy's release there has been much discussion of Canada's hydrogen industry, but no significant action at the federal level to move ahead on the scale-up of these industrial and supply-chain hubs and corridors. Other commitments in the strategy such as increased communications, codes and standard development, industry/government engagement, demonstration projects, etc. are similarly lagging due to a lack of resources at the federal level.

In the meantime, global need and motivation for hydrogen has accelerated rapidly. Countries such as Germany, the United States and China are applying significant nation resources to hydrogen development. Canada has committed to export clean hydrogen by 2025 through the Canada–Germany Hydrogen Alliance, but we are far behind meeting this new target. Deployment of the Hydrogen Strategy must be appropriately resourced to accelerate its implementation.

There is an urgent need to fund the development of hubs, including funding for feasibility studies, coordination, matchmaking, permitting, and municipal/provincial outreach, among other activities. Only this way will Canada be able to meet the goal to develop 30 hubs by 2030 and to decarbonize the country's most polluting corridors. However, funds such as SIF and CIB don't see hub coordination initiatives as part of their eligible use of funds.

Meanwhile, provinces are showing leadership on this front, with Quebec and Alberta providing $80 and $50 million dollars, respectively, for hub funding. The CHFCA has previously estimated that the launch and management of a hub would cost approximately $4 million dollars per hub. Extrapolating to 30 hubs, the support for an appropriate launch and coordination effort would be in the order of $120 million dollars.

The resulting public and private sector investment in projects tied to the hubs could top $10 billion by 2030. This would help Canada to do its part in meeting the requirement outlined in the International Energy Agency's Hydrogen Status Report 2022[1] that the world double must hydrogen production and use – especially in new energy applications – to meet the goal of net zero by 2050.

Recommendation 4: That the government work with provincial governments, utilities, and other energy providers to find creative ways to manage electricity costs for hydrogen production

Clean hydrogen can and should be produced from all energy sources, including fossil fuels with carbon management, nuclear and renewable power and biomass. However, production from clean power will be a vital and growing component for domestic and export opportunities.

Electricity costs are a major expense in hydrogen production and can disincentivize domestic industry and the scale-up of current production opportunities, let alone export opportunities. These costs are further amplified by a patchwork approach to grid management, regulation and management across Canada's provinces and territories.

Recognizing that a solution to increasing electricity costs cannot just be a one-government, or entity, approach we encourage the federal government to work with provincial governments, and regulatory agencies, utilities, independent power producers and other energy providers to find creative ways to manage electricity costs. This could include mirroring U.S. policy by providing financial support to provincial and municipal regulators to speed up application reviews or by

[1] https://www.iea.org/reports/global-hydrogen-review-2022

accelerating the standing up of Natural Resources Canada's already-announced regional roundtables by ensuring all necessary stakeholders, including those along Canada's hydrogen value chain, are included at the decision-making table.

The CHFCA recommends the allocation funding assistance for utilities (and by extension renewable electricity producers) to expand their provincial grids in light of increasing demands by electrification and decarbonization targets.

Closing remarks

Canada has always been at the forefront of the global hydrogen industry, but with the rapid development of the sector over the past few years, and our lack of action at home, Canada is falling behind. Canada must invest – smartly, heavily, and rapidly – to reclaim our leadership position in the hydrogen sector.

We propose a bold, timely and actionable plan for Canada:

- Accelerate implementation of the ITC announced in Budget 2022.
- Match—or better—the U.S. PTC with a similar program here in Canada.
- Commit to a turn-around of six months to one year SIF, CFF, CIB, or any future funding.
- Renew CFF funding every year by the same level of funding for the duration of the energy transition.
- Develop a "one window" approach for all regulatory permits and Government of Canada funding applications.
- Support the appropriate launch and coordination effort for hubs and corridors, as per our commitment in the Hydrogen Strategy to develop 30 hubs by 2030 and to decarbonize the country's most polluting corridors.
- Allocate funding assistance for utilities and renewable electricity producers to expand their provincial grids and increasing demands.

About the Canadian Hydrogen and Fuel Cell Association (CHFCA)

The Canadian Hydrogen and Fuel Cell Association (CHFCA) is a national sector association that supports industry, academia, government agencies, financial organizations and other stakeholders focused on hydrogen and fuel cell technologies and products. As the collective voice of Canada's world-leading hydrogen and fuel cell sector, the CHFCA's mission is to strengthen Canadian leadership, raise awareness of the benefits of the technology, and accelerate the adoption of its members' products and services in Canada and abroad. The CHFCA currently has more than 160 members across Canada and regional branches in British Columbia, Alberta, and Quebec. The CHFCA can be followed on LinkedIn at @CHFCA, Twitter at @PoweringNow and visited at www.chfca.ca