

February 09, 2024

Department of Finance Canada
90 Elgin Street
Ottawa ON
K1A 0G5

Via email to Budget2024@fin.gc.ca

Dear Department of Finance Canada,

Re: Pre-Budget Consultations 2024

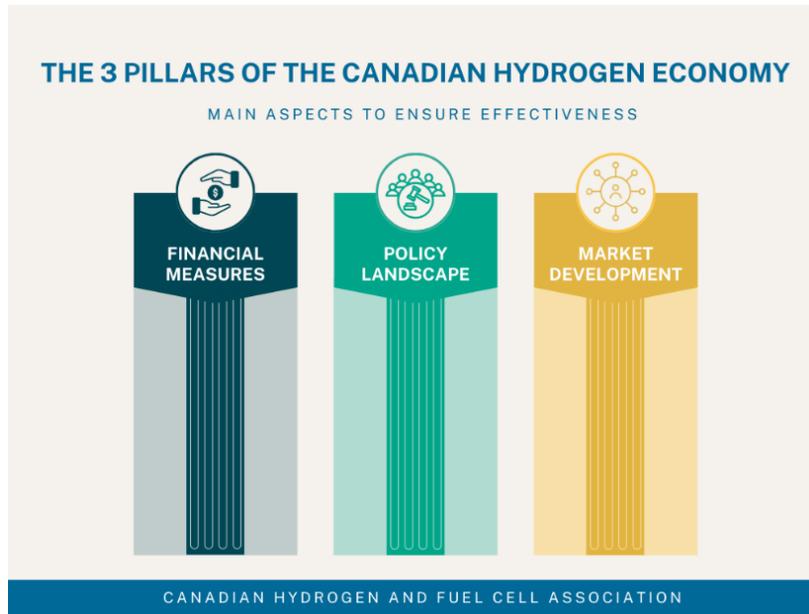
With one of the cleanest energy supplies in the world, Canada is in a unique position to become an industrial leader of clean fuels. In 2020, the Government of Canada announced the *Hydrogen Strategy for Canada*, which lays out a framework for actions that will cement hydrogen as an instrument to achieve net-zero emissions by 2050. The *Strategy* projects that by 2050, hydrogen could make up 30% of the country's fuels and feedstock by 2050, create about 350,000 jobs, and remove up to 190 megatonnes of GHG emissions per year.

From pioneering electrolysis technologies over a century ago to developing North America's first hydrogen cluster almost 40 years ago, Canada has been a trailblazer for many hydrogen developments that are starting to become standard fare due to our foundations.

On December 20, 2023, the Department of Finance released the first draft of legislation for the clean hydrogen investment tax credit (CH ITC), which is one of the current implementation tools of the *Hydrogen Strategy*. While a promising step, Canada still requires a comprehensive suite of measures to implement the *Hydrogen Strategy*.

The recently published draft regulations for the United States Inflation Reduction Act's hydrogen production tax credit have several prescriptive requirements, which gives Canada the rare opportunity to attract global investments and carve out its niche as a dominant player in the clean hydrogen arena. Budget 2024 is a chance to seize this opportunity and a failure to do so can result in falling short of fulfilling the ambitious objectives of Canada's *Hydrogen Strategy*.

Writing on behalf of the Canadian Hydrogen and Fuel Cell Association (CHFCA) and our 200 members, I am enclosing below our formal submission to the 2024 pre-budget consultation. Our submission elaborates on how the Government of Canada can better leverage Canada's hydrogen resources by focusing on three pillars: **Financial Measures, Policy Landscape, and Market Development**.



In a context of fiscal constraints, the imperative for these three pillars to operate in harmony is heightened. Many of the initiatives proposed herein demand minimal new investment yet necessitate an honest dedication to fostering the hydrogen economy.

1. Financial Measures

We call on the Government of Canada **to allocate financial resources to supporting the development of Canada's hydrogen and related industries**. A diverse portfolio of fiscal measures, i.e., tax and direct spending measures, applied and implemented *consistently and clearly*, will help bring more meaningful investment in hydrogen.

Improving the Clean Hydrogen ITC

The CH ITC is expected to cost \$5.6 billion over five years, beginning in 2023-24 and it is expected to cost an additional \$12.1 billion between 2028-29 and 2034-35. Currently, the CH ITC has varying phase out schedules, narrow eligibility criteria, knowledge sharing requirements, auditing risks, and a lack of clarity on the "stackability" of certain ITCs. The CH ITC also has stringent ITC eligibility requirements for hydrogen capital assets, pathways, and processes as well as for projects with power-purchase agreements. These inconsistent, unclear, and discriminatory features must be addressed, or else an under-subscription of this costly ITC will ensue.

An example of an unfavorable feature pertinent to allocating financial resources to support hydrogen is the inability to stack different clean economy ITCs for different project portions. Government assistance programs require financing by the Government of Canada to administer the streams. In the US Inflation Reduction Act, there are provisions on combining the US ITCs with other government assistance. To ensure competitiveness, we call on the government to:

- **Make an exception so that neither the Clean Technologies ITC, for example, nor the CH ITC be reduced by the presence of other government assistance.**

We kindly ask you to refer to the CHFCA's feedback to the ITC draft legislation for a detailed explanation on areas of improvement. A copy is provided for your convenience in Appendix A.

Providing dedicated funding to hydrogen projects

In recent years, programs like the Net Zero Accelerator, the Strategic Innovation Fund (SIF), and the Clean Fuels Fund (CFF) have spurred some of Canada's key hydrogen projects.

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

We would also support the creation of **a separate funding program designed to advance the hydrogen value chain.** We **advise taking a technology-agnostic approach to providing dedicated funding for hydrogen.** For example, hydrogen can decarbonize heavy and medium-duty transportation, but hydrogen internal combustion engines and dual-fuel engines are not eligible under the Green Freight Program.

If Canada intends to participate in the global hydrogen industry, it is imperative that the government:

- ***Recapitalize existing funds/programs to allocate for hydrogen and/or create new hydrogen-specific funds/programs.***

2. Policy Landscape

We call on the Government of Canada ***to create an appealing policy landscape by leveraging existing clean energy advantages, providing greater clarity in its CI assessments, streamlining, and simplifying regulatory processes and better synchronizing clean economy incentives.***

Competing with the IRA and leveraging existing advantages

Firstly, it is important to circle back to the topic of the IRA's Production Tax Credit, which provides a tax credit per kilogram of clean hydrogen produced during a 10-year time period. In the recently published production tax credit guidance, the proposed regulations generally adhere to the stricter view embodied in the so-called three "pillars" of clean power: (1) additionality, (2) temporal matching and (3) geographic correlation. The proposed regulations are a decision to enforce strict limits on credit availability to hydrogen producers even though these limits will increase costs for the industry.

The proposed regulations present an opportunity to win over investors by developing a more business-friendly and certain environment. As a starting point, it is important to reinforce the need to develop an appealing policy landscape by leveraging Canada's natural advantages:

- **Clean Grids of today:** Canada's cleaner energy grids contribute to a sustainable energy ecosystem, reducing carbon footprint, and setting a global standard for clean energy practices.

- **Net Zero Grids tomorrow:** The Clean Electricity Regulation (CER) ensures the transition of all Canadian grids to net-zero emissions by 2035. Canada should rely on the impact that the CER will have on cleaning our grids, and remove any hurdles to companies accessing the CHITC, which have already been addressed by the CER.

Our clean electricity and energy grids provide Canada a distinct edge. This moment presents a rare and timely opportunity for Canada to attract significant investments, especially in light of the potential delays in the final decision on the 45V. Our call to government is to:

- ***Leverage Canada's existing advantages, i.e., our clean electricity grids and advantageous electricity regulations, to seize the IRA's production tax credit blunder.***

Clarifying LCA Methodologies and Data

As a perfect segway, to ensure projects use Canada's clean grids of today and will use our net-zero grids of the future, the **Government of Canada must revise the LCA model to reflect recent data and expected improvements in grid CI**. The LCA is not currently pre-populated for green hydrogen/ammonia projects, which raises uncertainty about the validation of input assumptions.

The absence of a streamlined pathway for ammonia production and the use of outdated Carbon Intensity (CI) data from 2021 for all provincial grids hinder accurate assessments and prevents taxpayers from understanding the true CI of their own projects. The rapid pace of new renewable electricity generation should prompt the Government to keep CI data up to date with grid improvements and trends. We call on the government to:

- ***Revise the LCA model to reflect recent data and expected improvements in grid CI and ensure transparency in the sources of fuel pathways and data libraries.***

Streamlining Regulatory processes

This work is essential to the development of future large-scale industrial hydrogen. To ensure that domestic clean energy projects are built apace and ensure the swift export of Canadian hydrogen products, we encourage the Government:

- ***To explore potential avenues to effectively streamline regulatory processes with requirements and standards in key jurisdictions.***

Better Aligning Clean Economy Incentives

A better synchronized clean economy ITC regime will ensure greater cross-sector collaboration to compete in the global clean economy. For example, paragraph 127.48(10)(c) of the clean hydrogen ITC draft legislation states that the **capital cost of eligible clean hydrogen property must be reduced by the amount of government assistance in respect of the property**. Such a reduction of the capital cost disincentivizes provincial or municipal assistance to clean hydrogen projects, as any amount of provincial or municipal assistance would otherwise reduce the Federal government's

incentive. The Carbon Capture, Utilization, and Storage ITC is not subject to a similar exception. We call on the government:

- ***To remove the stipulation that capital cost of eligible clean hydrogen property must be reduced by the amount of government assistance.***

Similarly, to improve Canada's competitiveness, Canada must respond to the US CCUS (IRC 45Q) and hydrogen (IRC 45V) production tax credits not impacting the tax depreciation asset basis for equivalent projects. To keep up with rival standards, we urge that:

- ***The ITCs should not reduce the capital cost allowance (CCA) asset basis.***

3. Market development

Supply-side Incentives

Electricity costs are a major expense in hydrogen production through electrolysis and can disincentivize domestic industry, let alone exportation. These costs are further amplified by a patchwork approach to grid management, and regulation across Canada.

Recognizing that a solution to increasing electricity costs cannot just be a one-entity approach, we encourage the federal government to work with the provinces, regulatory agencies, utilities and other entities to find ways to analyze rate structures that will make production more affordable and, in turn, reduce the cost of low-carbon hydrogen for consumers. This could include mirroring U.S. policy by providing financial support to provincial and municipal regulators to speed up interconnection reviews and offer lower electricity rates for hydrogen production.

Similarly, access to grid power for base load of hydrogen plants is crucial to have a stable and secure operation. In British Columbia, BC Hydro offers the Clean Industry and Innovation Rate, a seven-year discount from BC Hydro's standard industrial rate available to new customer plants that use a process to produce low-carbon fuels.

Additionally, the Biden-Harris Administration announced \$750 million for research, development, and demonstration efforts to significantly reduce hydrogen costs. This is part of a larger \$1.5 billion investment from the Bipartisan Infrastructure Law aimed at advancing electrolysis technologies and improving manufacturing and recycling capabilities for clean hydrogen systems. Considering Canada's legacy in developing not only electrolyzers, but also fuel cells, we call on the government to:

- ***Develop unique incentive programs to access to electric power, and to support Canadian clean technology leadership, including electrolyzers, fuel cells, and other key technologies of the hydrogen supply chain.***

Demand-side Measures

Demand-side measures will ensure that industry has an incentive to invest in low-carbon fuels and that consumers have an appetite for hydrogen, which will make certain that investments to increase hydrogen supply yield financial returns.

The transition to low-carbon technology will require the Government of Canada to employ a broad-minded and incremental approach. For example, dual-fuel engines are an alternative to diesel-engines as hydrogen can reduce CO₂ emissions by up to 80% in a hydrogen-diesel dual fuel solution while not sacrificing key performance indicators. Dual-fuel engines offer consumers in sparsely populated countries like Canada, which do not have the best access to charging and refueling networks outside of their urban centers, the comfort that the engine can continue to perform entirely on diesel, should the hydrogen supply run low. We call on the Government to:

- ***To support all low-carbon hydrogen solutions, working with provincial governments to offer incentives such as rebates and tax exemptions to smoothen the fuel switching transition.***

To increase demand for hydrogen in novel industrial applications, ***supporting hydrogen offtake and increasing industry requirements will help scaleup the sector.*** As an example, the European Union's Renewable Energy Directive (RED III) requires that at least 42% of hydrogen used for energy and non-energy purposes in the industry come from renewable fuels of non-biological origin ("RFONBOs") by 2030, and 60% by 2035. Similarly, British Columbia has a Low-Carbon Fuel Standard, which sets increasingly stringent carbon intensity reduction targets for fuels each year and requires a 5% annual average renewable content in gasoline and 4% renewable content in diesel.

We urge the Government of Canada to:

- ***Explore all viable demand-side measures, like low-carbon hydrogen content mandates, that stimulate the growth of low-carbon fuels production and spur harmonized build-out of supply and demand.***

Hubs

Finally, it is important to circle back to the 2020 *Canada Hydrogen Strategy*, which committed to develop early deployment hubs for hydrogen by 2030. Since the strategy's release, there has been much discussion of Canada's hydrogen industry, but no significant federal action to move ahead on the scale-up of hubs. Hydrogen hubs will help spread out costs by establishing linked assets that will work in harmony to develop the entire hydrogen value chain.

As an example, the U.S. has allocated \$7 billion to establish seven Regional Clean Hydrogen Hubs. These hubs are designed to support the commercial-scale deployment of clean hydrogen, with each hub focusing on different aspects of hydrogen production and utilization. With four out of the seven selected hydrogen hubs located near the Canadian border, there's a tangible risk that without the development of a domestic hydrogen supply base, Canada might become an importer of hydrogen.



Funding for feasibility studies, coordination, matchmaking, permitting, and municipal/provincial outreach, among other activities can help kickstart early deployment. Only this way will Canada be able to meet its goal of developing 30 hubs by 2030.

While funds such as SIF and CIB don't see hub coordination initiatives as part of their eligible use of funds, 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. We call on the Government to:

- ***Develop a clean hydrogen hub initiative, mirroring the competitive selection process used for the five Canadian Superclusters. This program can receive financing through allocations from existing funds or through the establishment of a new, dedicated funding source.***

4. Conclusions

The Canadian Hydrogen Fuel Cell Association (CHFCA) appreciates the opportunity to contribute to the 2024 pre-budget consultation. We commend the Government of Canada for its ambitious commitment to clean economy incentives. However, we express concern over the potential underachievement of the 2020 Canada *Hydrogen Strategy's* objectives. To fully realize the hydrogen economy's potential and establish Canada as a leader in clean energy, we advocate for a strategic approach grounded in three pillars:

1. **robust financial support;** addressing the inconsistent, unclear, and discriminatory provisions within the CH ITC and recapitalizing existing funds or creating new, technology-agnostic funds to advance the hydrogen industry.
2. **a conducive and predictable policy environment;** streamlining regulatory processes, drawing alignment between clean economy incentives, and clarifying LCA methodologies and carbon intensity data to better leverage our clean grids of today and our future net-zero grids.

- 3. market development facilitation;** developing supply and demand-side measures, e.g., hydrogen fuel content requirements, incentives for consumer fuel switching, funding for a national clean hydrogen initiative, etc.

Given the urgency, developing a holistic and effective hydrogen support system is critical for success. The CHFCA and our 200 members are eager to collaborate with the Government of Canada to ensure the industry's successful inauguration. We request a meeting to discuss our proposed action items in detail.

Please contact me at your earliest convenience to arrange a discussion. Your consideration is greatly appreciated.

Sincerely,

Ivette Vera-Perez
President and CEO

Appendix A - CHFCA comments to the draft legislation for Clean Hydrogen Investment Tax Credit

February 05, 2024

Business Income Tax Division
Tax Policy Branch
Finance Canada
90 Elgin Street
Ottawa, Ontario K1A 0G5

Via e-mail to Consultation-Legislation@fin.gc.ca

Dear Tax Policy team,

Subject: Legislative Proposals Relating to the Income Tax Act - Clean Hydrogen Investment Tax Credit

Writing on behalf of the Canadian Hydrogen and Fuel Cell Association (CHFCA) and our 200 members, I am enclosing below our feedback on the Clean Hydrogen ITC to elaborate on how the Government of Canada can better leverage an instrument of this sort.

The CHFCA has raised concerns about the complexity and inconsistency of Canada's clean economy ITCs. Varying phase out schedules, narrow eligibility criteria, knowledge sharing requirements, auditing risks, and a lack of clarity on the "stackability" of certain ITCs need to be simplified to improve Canada's ITC regime. Stringent ITC eligibility requirements for hydrogen capital assets, pathways, and processes as well as for projects with power-purchase agreements are issues that must be addressed.

We urge the Federal Government to decisively support the hydrogen industry as a crucial driver for achieving net zero, fostering substantial job creation and economic growth. Below are our key asks:

- ***Add a safe-harbour provision to allow qualified capital expenditures to continue accessing the ITCs even after the cut-off date.***
- ***Allow for the "stacking" of different clean economy ITCs for different project portions.***
- ***Adjust the CH ITC recapture period to five years.***
- ***Make all forms of partnerships eligible for the CH ITC.***
- ***Expand the ITC eligibility of capital assets that are critical to hydrogen projects.***
- ***Draw broader alignment between the CHITC with the CCUS ITC.***
- ***Include methane pyrolysis and by-product hydrogen in the CH ITC.***
- ***Make all viable carriers ITC eligible, including, but not limited to, e-methane, methanol, SAFs, LOHCs, etc. Hydrogen carriers should qualify for a 40% ITC credit rate.***
- ***Reduce the eligibility requirements for PPAs and make similar instruments ITC eligible.***
- ***Expand eligible sources of clean energy to nuclear, geothermal, and others.***
- ***Allow imported power from connected provinces as grids become more inter-connected.***

Contents

- 1 Context..... 3
- 2 De-risking Investments 3
 - 2.1 Timelines for CHITC Eligibility 3
 - 2.2 Stackability of ITCs and grants..... 3
 - 2.3 CHITC recapture – propose to shorten ITC recapture period..... 4
 - 2.4 Qualifying taxpayers (partnership restrictions) 4
 - 2.5 Qualifying taxpayers (exclusion of tax-exempts / first nations partners)..... 5
- 3 Inclusions 5
 - 3.1 Machinery and Equipment and Structures 5
 - 3.2 Pathways 6
 - 3.3 Carriers 7
- 4 Supporting Taxpayer Projects with PPAs 8

1 Context

Already boasting one of the cleanest energy supplies in the world, Canada is in a unique position to lead the energy transition. In 2020, the Government of Canada announced the *Hydrogen Strategy for Canada*, which lays out an ambitious framework for actions that will cement hydrogen as an instrument to achieve net-zero emissions by 2050.

On December 20, 2023, the Department of Finance released including the first draft of legislation for the clean hydrogen investment tax credit (CH ITC), which is one of the current implementation tools of the *Hydrogen Strategy*. The purpose of the CH TC is to encourage the investment of capital in the production of clean hydrogen and clean ammonia in Canada. The CH ITC proposes to provide a refundable tax credit of 15% to 40%, depending on the carbon intensity of the hydrogen produced, on eligible expenses incurred for a property that produces hydrogen and becomes available for use on or after March 28, 2023 (but before 2035).

The CH ITC is expected to cost \$5.6 billion over five years, beginning in 2023-24. Between 2028-29 and 2034-35, the CHITC is expected to cost an additional \$12.1 billion. Under a backdrop of the U.S. federal government taking a turn towards a punitive hydrogen policy, seen most notably in the rules of the United States Inflation Reduction Act Bill 45V (hydrogen production tax credit), Canada has a rare opportunity to swing the hydrogen balance of power in its favor by enabling taxpayers to fully benefit from federal commitments that can catalyze taxpayers' hydrogen investments.

2 De-risking Investments

2.1 Timelines for CHITC Eligibility

The current design of the CH ITC includes strict cut-off dates and eligibility criteria tied to clean technologies. Specifically, ITC rates are reduced by 50% in 2034 and are fully phased out after 2034.

Clean technology projects often face lengthy and unpredictable regulatory, permitting, and construction schedules. Delays in projects introduce risks managed through relationships with infrastructure lenders and financial organizations. Given these uncertainties, project developers would like comfort in knowing that flexibility will be provided if unforeseen risks delay a given project. In the United States, a provision exists that provides a 2-year grace period for clean hydrogen projects that have entered construction prior to phase out of the CH ITC program. We call on government to:

- ***Add a safe-harbour provision to allow qualified capital expenditures to continue accessing the ITCs even after the cut-off date.***

2.2 Stackability of ITCs and grants

Under the *Income Tax Act*, government assistance received by a taxpayer while earning income from a business or property may reduce related expenses, capital costs, or the taxpayer's income. The amount of assistance may also reduce the amount of an expenditure on which an associated investment tax credit is based.

In the US Inflation Reduction Act, there are provisions on combining the US ITCs with other government assistance. To ensure competitiveness with the US ITC, an exception should be made so that neither the Clean Technologies ITC nor CH ITC would be reduced by the presence of other government assistance. We call on government to:

- ***Allow for the “stacking” of different clean economy ITCs for different project portions.***

2.3 CHITC recapture – propose to shorten ITC recapture period

The Draft Legislation proposes a period of 20 years to recapture the value of the CH ITC claimed for a project should the property be converted to a non-hydrogen or ammonia use, be exported from Canada or disposed of.

In contrast, The US IRA imposes a five-year recapture period for its ITC. This recapture period is considered reasonable due to the fluctuating fair market rate of projects based on market conditions. Financing periods usually last 5-10 years, and projects may undergo multiple refinancing periods over a 20-year period. The potential for recapture during a refinancing period could limit a company's ability to secure favorable rates for project refinancing. We call on government to:

- ***Adjust the CH ITC recapture period to five years, keeping in line with the standards set in the US IRA and capital re-financing cycles.***

Furthermore, an exception to the CH ITC recapture should be added in circumstances where a taxpayer that claimed the ITC disposes of the particular property to a related party. The CH ITC recapture would be deferred where CH property is disposed to a related taxable Canadian corporation in circumstances where the property would be CH property to the purchaser and is used by the purchaser for a CH use.

2.4 Qualifying taxpayers (partnership restrictions)

The CH ITC can be claimed by taxable Canadian corporations as well as those through a partnership. For limited partnerships, the CH ITC allocated to a limited partner is further limited to their at-risk amount.

New partnerships have no tax history and may not generate revenues until their projects are operational. The inclusion of entities with varying levels of tax liability in partnerships can create challenges for investors. To fully unlock the potential of Indigenous groups, for example, interested in clean hydrogen projects, we urge the government to:

- ***Make all forms of partnerships eligible for the CH ITC.***

In terms of limited partnerships, Bill C-59 will further limit the CH ITC amount that can be allocated to and claimed by a limited partner. These restrictions come into play when a limited partner has financed a clean property through debt or has not contributed significant capital. In such cases, the limited partners may not have enough at-risk amount to fully benefit from the CH ITC, which becomes problematic for the clean energy sector, which often relies on debt financing.

Imposing restrictions based on the business organization goes against the goal of encouraging the investment of capital. Therefore, we urge the government to:

- ***Remove the limited partner restrictions or provide a mechanism to re-allocate restricted Clean Economy ITCs to general partners of the partnership.***

2.5 Qualifying taxpayers (exclusion of tax-exempts / first nations partners)

Currently, apart from the Clean Electricity ITC, partnerships that include tax-exempt partners, such as Indigenous-owned businesses, would not receive the same level of funding for eligible clean energy projects. This is a disparity in treatment, as Indigenous partners are unable to claim an ITC at the same rate as their taxable partners, creating an economic disadvantage.

To address this issue, our calls to action are that:

- ***In addition to the Clean Electricity ITC, the remaining Clean Economy ITCs should be expanded to provide equivalent financing support to all owners of eligible projects, regardless of their taxable status.***
- ***Make partnership governance structures that include non-taxable entities eligible for the full amount of the CH ITC.***

3 Inclusions

3.1 Machinery and Equipment and Structures

Through paragraphs (c) to (v) under ***Eligible Clean Hydrogen Property***, the Government of Canada enumerates conditions to which a property, would be ITC eligible. These enumerations should be expanded to include more capital assets. While we understand that any and every building cannot not be made ITC eligible, certain machinery and equipment connected to, or are external to a facility that are needed to support clean hydrogen production should be included. We call for including:

- ***Machinery and equipment and assets connected to, or are external to a facility, e.g., underground hydrogen storage, heating equipment, equipment housing, etc.;***
- ***and process material purification system, raw water system, process water system, stormwater system, and loading process equipment.***

Similarly, under ***Clean Ammonia Equipment***, the Government of Canada should expand the eligible list of clean ammonia equipment by **adding vapour capture and compression equipment.**

Furthermore, it is important that the Government of Canada supports the development of the entire hydrogen value chain to remain competitive. Liquefaction is equally important as distribution in the value chain as the former is a vital enabler of the distribution of hydrogen. The volumetric density advantage of liquid hydrogen enables distribution over greater distances and at a larger scale. This advantage also enables cost reductions and efficiencies essential for domestic hydrogen networks.

Likewise, "on-site hydrogen transportation," i.e., transportation within project boundaries, deserves equal attention. Feed and product pipelines for greenfield clean hydrogen projects, for example, are vital to normal operations.

Therefore, we call on government:

- ***To make liquefaction machinery and equipment and structures;***
- ***and on-site transportation machinery and equipment and structures, e.g., feed and product pipelines and hydrogen-specific trailers, eligible.***

3.2 Pathways

Natural Gas + CCUS

The CHFCA and its members seek broader alignment with the Carbon Capture, Utilization, and Storage (CCUS) ITC's features in several ways. For example, paragraph 127.48(10)(c) states that the capital cost of eligible clean hydrogen property must be reduced by the amount of government assistance in respect of the property. Such a reduction of the capital cost disincentivizes provincial or municipal assistance to clean hydrogen projects, as any amount of provincial or municipal assistance would otherwise reduce the Federal government's incentive. The CCUS tax credit is not subject to a similar reduction. We call on the government:

- ***To remove this stipulation that capital cost of eligible property be reduced by the amount of government assistance.***

As another example of a lack alignment, only the CCUS ITC allows tax benefits when expenses are incurred, rather than when eligible properties become available for use. To optimize the value of tax benefits, we call on government:

- ***To align the timelines of the CHITC with the CCUS ITC, enabling companies to efficiently deploy capital and reduce the need for additional borrowing/alternative funding sources.***

Furthermore, noting that the US CCUS (IRC 45Q) and hydrogen (IRC 45V) production tax credits do not impact the tax depreciation asset basis for projects, to improve Canada's competitiveness, we urge that ***the ITCs do not reduce the capital cost allowance (CCA) asset basis.***

Methane pyrolysis

Global and domestic experience with a proven technology like methane pyrolysis has brought about the rise of newer ultra-low emissions pyrolysis pathways that would easily qualify for the full 40% rate of the ITC. Taxpayers can utilize Canada's natural gas and biogas resources as well as clean electricity to produce hydrogen and by-product solid carbon without CO₂ emissions.

Methane pyrolysis's value proposition is unique, it is a form pre-combustion capture. By removing CO₂ before combustion is completed, CO₂ emissions from methane fuels are displaced without the need to use CCS technologies. Solid carbon enhances the advanced manufacturing sectors due to its convertibility into non-combustion high-value carbon products and materials.

The CHFCA understands that for a novel pathway like low-carbon methane pyrolysis to be assigned a CHITC credit level, Environment and Climate Change Canada (ECCC) must quantify its emissions.

Nevertheless, a glaring exclusion of this magnitude overlooks a golden opportunity to incentivize industries to reduce their CO₂ emissions by deploying pyrolysis machinery and equipment.

Therefore, due to the urgency in needing to table legislation in parliament and then implement a tax credit that rewards all eligible low-carbon pathways, we call on government:

- ***To include low-carbon methane pyrolysis in the CH ITC. To smoothen the process, we also ask Finance Canada to urge ECCC to recognize low-carbon methane pyrolysis pathways and finalize the corresponding Life Cycle Assessment (LCA) methodologies.***

By-product hydrogen

In 2021, Canada was the top exporter of sodium chlorate, whose low carbon-intensive production process creates hydrogen as a by-product. Similarly, the chloralkali industry, whose major products, chlorine, sodium hydroxide, caustic soda, sodium bicarbonate (baking soda), and sodium carbonate are used ubiquitously in everyday life and other industries, also produces by-product hydrogen. This by-product hydrogen, is currently being vented into the atmosphere, wasting its potential to contribute to decarbonizing Canada's economy.

To bridge the gap between the supply and demand of a fast-growing industry, it is crucial to leverage all low-carbon intensity hydrogen pathways. Capturing and purifying by-product hydrogen from the sodium chlorate process, and any other industrial process with hydrogen as a by-product, will be a great contributor to the effort of advancing the hydrogen economy in Canada. We urge:

- ***Including by-product hydrogen processes as ITC eligible processes.***

3.3 Carriers

The CHFCA is a strong advocate for the production of carriers from clean hydrogen and the ITC can help increase investment in compounds that will carry clean hydrogen to key export markets.

Nonetheless, CHFCA members have several doubts. First, members would like to understand the rationale behind the determination of 15% as the appropriate incentive tier for clean ammonia. Low-carbon ammonia should qualify for 40% as natural gas in the ammonia production process would be replaced by clean hydrogen sourced from low-carbon generation, e.g., renewables, abated-natural gas, etc. The CHFCA would support the creation of incentive tiers for ammonia based on the commodity's carbon intensity.

Secondly, and most importantly we encourage the Government of Canada to expand the CH ITC to also include other hydrogen derivatives, including e-methane, methanol, sustainable aviation fuels (SAF), liquid organic hydrogen carriers (LOHC), etc. These derivatives require incentivization as they are viable low-carbon alternatives to clean ammonia and possess qualities that make them equally as important as ammonia in the delivery of hydrogen. We call on government:

- ***To make all viable carriers of hydrogen eligible for the ITC. Other carriers may include, but are not limited to, e-methane, methanol, SAFs, LOHCs, etc.***

- ***These carriers qualify for a 40% ITC credit rate, with a tier system based on the carbon intensity of each carrier.***

4 Supporting Taxpayer Projects with PPAs

Budget 2023 indicated that Power Purchase Agreements (PPAs) and other similar instruments would be eligible for the ITC, subject to certain conditions. It alarms us that the Government of Canada omitted any reference to the term “other similar instruments” in the draft legislation.

Similar instruments are in a variety, such as renewable energy credits (RECs) and clean energy credits (CECs). RECs can be used to purchase clean electricity and achieve the highest CH ITC threshold. Through CECs, provinces that have invested significant amounts of capital to decarbonize its grid can utilize clean and reliable energy sources to lower the carbon intensity of hydrogen. We urge:

- ***Making other similar instruments, such as RECs and CECs, ITC eligible.***

In the 2023 Fall Economic Statement and now under *Eligible Power Purchase Agreement* in the draft legislation, the Government stipulates that electricity for taxpayer projects with PPAs must be:

“(a) sourced from hydro, solar or wind generation that

- (i) *first commenced electricity generation on or after March 28, 2023 and no more than one year before the taxpayer’s first clean hydrogen project plan is filed with the Minister of Natural Resources.”*

The “in-production date” is very similar to an “additionality” requirement as taxpayers would have to source their electrons from renewable generation that is to be in production on or after March 28, 2023, i.e., new projects. The timelines needed to develop new renewable power do not align with the timelines for hydrogen production, which limits the full realization of the incentive’s benefits. Flexibility must apply to a nascent industry that will only have a marginal impact on near-term energy demand. As an example, the European Union does not require additionality until 2028.

The CHFCA supports the gradual implementation of an “in-production” date of renewables by introducing ***a degree of phase-in for additionality requirements***. We call on government to:

- ***Change the 1-year look back to 36-months look back and including a transitional period (e.g. 2030 for early projects).***

With regards to sourcing the purchased electricity for PPAs, the language in (a) is prescriptive as it handpicks only a few eligible electricity sources. To incentivize all low-carbon sources in order to remain competitive, there should be an expansion of the list of eligible electricity sources. The CHFCA calls on government to:

- ***Modify the language in (a) along the lines of: “sourced from low-carbon electricity generation, e.g., hydro, solar, wind, abated natural gas, nuclear, geothermal, etc.”***

Finally, electricity markets will become increasingly inter-connected, with energy exports and imports becoming a key feature of system resilience. The language in the draft legislation does not facilitate expanded interconnection of provincial electricity markets. As an analogy, no region in Canada restricts eligibility for an electric vehicle subsidy – or support for the construction of charging stations – based on where electricity is generated. Thus, the CHFCA urges the government:

- ***To allow imported power from connected provinces as grids become more inter-connected.***

The Government of Canada's financial commitment to clean economy incentives is ambitious, and the objective to use these incentives to spur investment in the future clean economy is visionary. However, inconsistent, unclear, and discriminatory design features in the Clean Hydrogen ITC draft legislation could result in an under-subscription of the ITC. By de-risking investments through the simplification of tax systems and codes, including more low-carbon pathways, processes, and technologies and their relevant machinery, equipment, buildings, and structures, and better-supporting proponents using PPAs and other similar instruments, the CH ITC can thoroughly enable taxpayers to make investments in clean hydrogen assets that can boost clean growth in Canada.

We thank you for this opportunity to consider our feedback and to lay out our specific expectations of government in advancing hydrogen as a clean energy option for Canada. Time is of the essence, and developing an efficient and effective CH ITC will be crucial to the success of the sector. The CHFCA and our 200 members are ready to work together with the Government of Canada to ensure the successful deployment of the CH ITC, and we would like to take this opportunity to request an in person meeting to discuss the above-mentioned action items.

Please do not hesitate to contact me at your earliest convenience to schedule a time to discuss.

Sincerely,



Ivette Vera-Perez
President and CEO

CC – The Right Honourable Justin Trudeau, P.C., M.P., pm@pm.gc.ca

The Honourable Chrystia Freeland, P.C., M.P., chrystia.freeland@fin.gc.ca

The Honourable Jonathan Wilkinson, P.C., M.P., HonJonathan.Wilkinson@nrcan-rncan.gc.ca

The Honourable Steven Guilbeault, P.C., M.P., steven.guilbeault5@ec.gc.ca