Conservation Council of New Brunswick
Conseil de conservation du Nouveau-Brunswick
www.conservationcouncil.ca

Submission to Finance Canada: Clean Hydrogen Investment Tax Credit

To: Consultation-Legislation@fin.gc.ca ; Hydrogen-Hydrogene@fin.gc.ca
From: info@conservationcouncil.ca
February 5th, 2024

Throughout its 54-year history, the Conservation Council of New Brunswick has strived to increase awareness of environmental issues and advocate for solutions by conducting research, educating the public, and implementing interventions. We at the Conservation Council are committed to promoting solutions that are socially, environmentally, and economically responsible.

As part of our Climate Solutions Program, we aim to identify strategies to achieve net-zero emissions in the electricity and energy sectors, hence our participation in the Clean Hydrogen Investment Tax Credit (ITC) proposal review.

The Conservation Council's stance on hydrogen is as follows:

- Prioritize replacing current grey/black hydrogen production with green hydrogen production.
- Prioritize hydrogen for local chemical and industrial use. Transporting hydrogen over long distances has significant safety and environmental concerns.
- Avoid using hydrogen as an energy carrier as electricity is cheaper and more efficient.

Additionally, the Conservation Council also acknowledges that using renewable hydrogen technology can be strategically beneficial to Canada in meeting its climate goals by reducing emissions in sectors without current electrification options. Finance Canada's proposed investment tax credit is a support mechanism for fostering the expansion of renewable hydrogen technologies. However, the Conservation Council has significant concerns with the proposed draft legislation.

The ITC should not be a fossil fuel subsidy.

The Conservation Council emphasizes the importance of not subsidizing fossil hydrogen projects with the ITC This would contradict Canada's climate commitments and could lock the country into a fossil fuel-based economy. The tax credit should only support forms of hydrogen with virtually no greenhouse gas emissions, primarily green hydrogen, and prioritize renewable sources such as solar or wind-generated electricity.

Consider the full lifecycle of emissions.

The entire lifecycle of hydrogen production must be considered, including methane leaks and indirect warming effects. It's crucial for companies to be fully transparent about all emissions related to hydrogen production, including those from upstream sources like natural gas production and transmission. Currently, proposed regulations overlook hydrogen leaks, assuming them to be insignificant. However, hydrogen is not inherently climate-neutral. It's a potent greenhouse gas, with over 35 times the warming power of CO2 in the first 20 years and 100 times over the first 10 years.

Prevent hydrogen projects from consuming available renewable energy capacity or displacing renewable energy.

It's crucial to uphold the principles of additionality, deliverability, and hourly matching to ensure the effectiveness of the ITC. This means that the electricity used or purchased for producing green hydrogen must come from new carbon-free sources in addition to existing generation. It should also be efficiently delivered within the same region and matched hourly with the hydrogen plant's power consumption to avoid relying on fossil fuel-fired generation as a backup.

Only projects meeting these criteria should qualify for the ITC. These rules aim to ensure that hydrogen production doesn't drain clean electricity from the grid that could otherwise power homes, businesses, and electric vehicles. While the federal government has taken initial steps to prevent the ITC from using up existing renewable energy capacity, further measures are needed.

Use hydrogen to decarbonize the most challenging sectors and for domestic use.

The widespread use of hydrogen without specific targets could hinder efforts to reduce carbon emissions. This may occur because prioritizing hydrogen investment means postponing the adoption of alternative and more effective electrification strategies and energy efficiency measures. Using hydrogen extensively in areas where alternative energy sources might be more effective places an unnecessary strain on the energy system. As a result, transition costs would rise unnecessarily, slowing progress toward climate goals. Additionally, Canada should prioritize local production due to the challenges and expenses associated with transporting hydrogen.

Although companies producing hydrogen have no control over its applications, these projects typically have planned buyers.Therefore, tax credits should focus on strategic uses. Certain applications, like blended hydrogen for home heating or power generation, should be ineligible if they hinder the adoption of more effective decarbonization solutions.

Do not create more affordability challenges.

Increasing hydrogen production may worsen affordability issues. Strong evidence indicates that hydrogen use is less efficient and costly for home heating and fueling vehicles than electrification. A recent analysis of 32 independent studies focusing on hydrogen use in homes concluded that relying on hydrogen for heating and cooking is impractical, inefficient, expensive, and resource-intensive. Heat pumps, on the other hand, is five to six times more efficient than heating with gas blended with hydrogen.Consumers using hydrogen to heat could experience costs 50% higher than those using electricity. Research indicates that blending 20 per cent hydrogen into the fossil gas grid may lead to price increases of up to 43 per cent for industrial consumers and up to 16 per cent for households. Subsidizing hydrogen projects in these sectors may also burden Canadians with higher costs for essential needs.

Avoid double dipping.

The Conservation Council supports the government's approach to preventing companies from double-dipping in various investment tax credits. Hydrogen projects funded from other federal sources should not be eligible for the ITC.

Community engagement and accountability.

The Conservation Council insists on projects obtaining free, prior, and informed consent from Indigenous communities. Companies receiving tax credits should be held accountable for mitigating any impacts of the project on affected communities.

Transportation and local production focus.

Local hydrogen production should be prioritized to avoid complexities, costs, and risks associated with transportation. Hydrogen production with the primary purpose of exporting should be avoided. The ITC should target strategic applications for hydrogen production for local chemical and industrial use.

Require third party verification.

The Conservation Council calls for transparency and third-party verification of emissions data, and it recommends excluding hydrogen projects using dirty (fossil fuel) feedstock for production, emphasizing the importance of relying solely on renewables.

Summary of recommendations

The proposed ITC should align with environmentally, socially, and economically sound solutions. Priority should be given to green hydrogen production over fossil fuel-based alternatives to effectively meet Canada's climate commitments. Transparency regarding emissions and adherence to strict principles of additionality and accountability are essential. Additionally, renewable energy projects should not be stopped or diverted for hydrogen projects. It is essential to prioritize hydrogen use domestically and in sectors that are the hardest to decarbonize while avoiding exacerbating affordability issues. Furthermore, measures to prevent double-dipping, engage Indigenous communities, focus on local production, and require third-party verification are crucial for successfully implementing the tax credit.