HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

House of Commons Standing Committee on Finance – Pre-budget Consultations 2013

This brief is submitted by:

◉ **an organization** **Organization name:** Enbridge Inc.

or

○ **an individual** **Name:** _____

Topic: Innovation and commercialization

*Recommendation 1: Please provide a short summary of your recommendation.

New non GHG emitting gas technologies are emerging to support smart energy grids where electric wires and gas pipelines are integrated. Commercializing these technologies will increase grid flexibility, reduce costs and help Canada reduce the overall cost of meeting its non-emitting objectives.

Commercializing these technologies improves overall energy system efficiency and innovation. However, investment barriers include highly distorted policies that exclusively target the electricity marketplace. Targeted tax measures can help attract investment despite the embedded market distortions.

Expected cost or savings: From the pull-down menus, please indicate the expected cost or savings of your recommendation to the federal government and the period of time to which the expected cost or savings is related.

Please select from the drop down menu

5 or more years

Federal funding: Please provide a precise indication of how the federal government could fund your recommendation. For example, indicate what federal spending should be reallocated, what federal tax measure(s) should be introduced, eliminated or changed, etc.

Support commercializing emerging energy technologies that will enhance the efficiency, competitiveness and footprint of our existing energy infrastructure through a targeted Investment Tax Credit.

1. Establish an Investment Tax Credit (ITC) of 30% of technology expenditures that are associated with the supply and construction of facilities that provide non-emitting gaseous energy supplies that reduce the GHG intensity in our energy systems.

This measure is aimed at commercialization; therefore, it is recommended this be a new ITC rather than build on the existing SRED tax credit.

Intended beneficiaries: Please indicate the groups of individuals, the sector(s) and/or the regions that would benefit by implementation of your recommendation.

This increases Canada's progress towards its 2020 non -emitting objectives by linking new supplies of renewable energy with Canada's existing natural gas storage systems. This brings new supplies of non-emitting energy into the larger energy economy as power, heat, transportation fuel, or lower carbon petroleum products. Early investments can increase innovation in Canada's hydrocarbon and renewable energy sectors and commercialize home-grown clean-tech innovations. The regional benefits exist throughout the gas pipeline system stretching from the Pacific through to the Gulf of St. Lawrence.

General impacts: Depending on the nature of your recommendation, please indicate how the standard of living of Canadians would be improved, jobs would be created, people would be trained, etc.

Beyond 2020, if the natural gas pipeline and storage networks were contributing to our non-emitting energy objectives, the annual savings for the Canadian economy could exceed $1 billion per year compared to current planning that seeks all non-emitting energy from the electricity sector. Co-benefits will include new skills development in our energy sector workforce, improved opportunities for academic-industry partnerships and improved export opportunities for Canadian clean-tech manufacturers who can increase their global leadership through strong domestic market-pull.

Topic: Infrastructure

Recommendation 2: Please provide a short summary of your recommendation.

There are challenges with meeting environmental goals solely through increasing non-emitting electricity production. Canada now faces hurdles when increasing its energy infrastructure footprint. New wind farms and electricity transmission projects are highly visible infrastructure; however, small footprint systems for non-emitting gas supplies that connect to existing, buried pipeline and storage infrastructure can offer new delivery options for non-emitting energy with less impact on communities. New definitions for eligible Class 43.1 investments can harmonize CCA treatment.

Expected cost or savings: From the pull-down menus, please indicate the expected cost or savings of your recommendation to the federal government and the period of time to which the expected cost or savings is related.

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5 or more years

Federal funding: Please provide a precise indication of how the federal government could fund your recommendation. For example, indicate what federal spending should be reallocated, what federal tax measure(s) should be introduced, eliminated or changed, etc.

2. Amend the Capital Cost Allowance ("CCA") Class 43.1 definition to also include investments in technologies that enable the direct and indirect supply of non-emitting energy as a gaseous energy supply

• Expand the scope to specifically include all (not just some) technologies that provide a non-GHG emitting gaseous energy supply which can be used in gas pipeline energy storage systems, or used directly in end-use applications like petroleum refining, or vehicle refueling with hydrogen, compressed natural gas, etc.

Intended beneficiaries: Please indicate the groups of individuals, the sector(s) and/or the regions that would benefit by implementation of your recommendation.

The Canadian Gas Association estimates that if just 10% of Canada's renewable natural gas (RNG) was tapped we could provide enough renewable (non-emitting) energy for over 1 million homes. Add to this the new technology like Power-to-Gas, which convert surplus non-emitting electricity into non-emitting gas, and the existing gas pipeline infrastructure becomes a cost-effective foundation for a sustainable energy future. Much of Canada already has access to gas pipeline infrastructure, we just need to attract investments to new non-emitting gas supply technologies to supply the pipelines.

General impacts: Depending on the nature of your recommendation, please indicate how the standard of living of Canadians would be improved, jobs would be created, people would be trained, etc.

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Topic: Please select from the pull-down menu

Recommendation 3: Please provide a short summary of your recommendation.

Expected cost or savings: From the pull-down menus, please indicate the expected cost or savings of your recommendation to the federal government and the period of time to which the expected cost or savings is related.

Please select from the drop down menu

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Federal funding: Please provide a precise indication of how the federal government could fund your recommendation. For example, indicate what federal spending should be reallocated, what federal tax measure(s) should be introduced, eliminated or changed, etc.

Intended beneficiaries: Please indicate the groups of individuals, the sector(s) and/or the regions that would benefit by implementation of your recommendation.

General impacts: Depending on the nature of your recommendation, please indicate how the standard of living of Canadians would be improved, jobs would be created, people would be trained, etc.

Please use this page if you wish to provide more explanation about your recommendation(s).

Examples of non-emitting gas technologies that would benefit from targeted tax measures include:

i) Renewable natural gas (RNG) such as landfill gas, municipal organics programs and processed agricultural wastes that are purified for pipeline injection

ii) Power-to-Gas technologies, like hydrogen electrolyzers, to harvest surplus nuclear, wind and hydroelectric power to convert this into renewable hydrogen gas

iii) Carbon-reducing technologies that integrate thermal or electrical energy with a gas stream to reduce or remove carbon from natural gas.

iv) Fuel cells that enable the conversion of clean gas supplies into non-emitting power without air pollutants.

Context:

Canada has an objective to supply 90% of our electricity from non-emitting sources by 2020. We have already achieved a relatively low-carbon electricity supply with approximately 75% of our power coming from technologies such as large hydropower, nuclear, and wind power. (Now or Never, Standing Senate Committee on Energy, the Environment and Natural Resources).

One of the primary challenges related to further increasing the supply of non-emitting electricity and reach our environmental objectives is the inability to store this energy to any great extent. Non-emitting power generation often provides surplus, and with growing supplies of intermittent renewables like wind power, this problem becomes even more pronounced. A key tool in managing surplus supply, in the absence of large scale storage solutions, is to export this high-value electricity at low or sometimes negative prices – in effect, releasing this valuable resource in a way that delivers a subsidy from Canada to neighbouring economies without fair compensation.

In simple terms, we believe that solely creating more non-emitting electricity, without addressing the distribution and storage challenges in the electricity grid, may be producing more problems than solutions. Electricity storage technologies are emerging, but most lack the necessary scale to address the size of the challenge, and most still require a substantial price premium over and above the cost of the renewable energy. A cost-effective alternative to dedicated electricity storage systems is producing or converting renewable energy into a non-emitting gas like hydrogen that can be injected into existing pipelines for transportation, storage and subsequent delivery to a variety of commercial applications.

Understanding the Government of Canada's commitment to balancing the budget in 2015, this proposal can enhance the energy system efficiencies while offering economic benefits throughout the larger economy. At the same time this can increase our supply of non-emitting energy. A five-year ITC is recommended, starting in 2014. To reduce the fiscal pressures, the first two years of ITC eligibility could be restricted to smaller projects having an output rating plate capacity of 10 MW (36 Gigajoules/Hr). Further modelling will be required.

*Please note that at least one recommendation must be provided