Federal Pre-Budget Submission 2022

List of Recommendations:

1.) Support for the freight sector through an enhanced and expanded Natural Resources Canada's Green Commercial Freight Assessment and Deployment Program to deploy low emissions fleet technologies – $500 million. Funding for commercial fleets to deploy a variety of low emissions technologies and alternative fuel vehicles including natural gas vehicles – to leverage private sector investments supporting significant Canadian technologies and suppliers.

2.) Support for transit agencies and municipal services through federal-provincial infrastructure and transit agreements – $500 million. Federal funding to leverage local government and private sector investments in developing waste-to-energy renewable natural gas projects to fuel net zero emissions public transit and municipal fleet vehicles.

3.) Support Canadian marine leadership with strategic investments in liquefied natural gas (LNG) bunkering and in supporting maritime fleets converting to LNG – $500 million. Funding to build on existing private sector supported projects and to encourage additional activities to grow Canada's leadership role in deploying low emissions fuels in the global marine sector.

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Introduction

The Canadian Natural Gas Vehicle Alliance (CNGVA) represents Canada's gaseous fuels industry. Gaseous fuels, including natural gas vehicle (NGV) technologies are proven, commercially available transportation solutions for fleets that reduce emissions while using lower-cost Canadian fuels and technologies. Our members include leading Canadian companies involved in manufacturing, fuel and infrastructure supply, vehicle technology, consulting, research, energy production, energy utilities and transportation fleets. Our mission is to promote use of gaseous fuels in transportation for the benefit of Canada's economy and environment.

Finding emissions reductions in the medium and heavy-duty transportation sector will require greater effort than current government policies and initiatives can support. Excessive focus on battery electric technologies have established a light duty cost per tonne of emissions reductions at $300 per tonne. While the Clean Fuel standard has set a notional carbon credit price at about the same level, the regulatory impact assessment statement clearly indicates that the credit market will be small. Moreover, the emissions impact of this regulation will deliver sectoral emissions reductions of less than 20 percent of the total. Revenues from planned increases in the carbon tax must be directed toward immediate opportunities to reduce emissions that do not already have policy support – such as battery electric vehicle subsidies – to help close the gap in meeting 2030 emissions reductions objectives.

NGV Transportation Opportunity

Use of gaseous fuels as an alternative to petroleum-based fuels has been a critical component of Canada's clean technology sector for many decades. Natural gas use in transportation offers a cost-effective approach to emissions reductions, due to the inherent low emissions characteristics of the fuel, coupled with abundant supply and an extensive distribution network. Original equipment engines that operate using natural gas are commercially available from major truck and bus manufacturers and can meet the needs of on-road, off-road, rail and marine transportation fleets. Canadian firms lead in the development of various technologies used to support deployment of these vehicles that are benefitting Canadians today.

The continuum of gaseous fuels in Canada ranges from auto propane and natural gas – currently in use – to renewable gases, including hydrogen. CNGVA members derive their primary business from the deployment of natural gas-based fuels, while all have expertise and products that can and likely will be used in hydrogen-based transportation. Renewable natural gas (RNG) is one of the most accessible and versatile drop-in fuels available today – meeting 90 percent of natural gas vehicle use in California. RNG is identical to pipeline specification natural gas and is without the limitations of other renewable fuels. In the near term, RNG blended with conventional natural gas offers a cost effective and compelling pathway to net zero emissions in the medium- and heavy-duty transportation sector. Building more RNG production offers immediate local economic development opportunities, while deploying more NGVs can use this waste-to-energy resource to reduce transportation emissions.

Hydrogen is of growing interest as a pathway to reducing emissions. It is a versatile fuel that can accentuate the performance of both the electricity grid and gaseous pipeline and distribution networks. CNGVA's experience with the deployment of alternative fuels in transportation transposed onto hydrogen points to the following areas for additional study and evaluation: Blending of hydrogen into delivered natural gas; and use of hydrogen for internal combustion engines.

Continued improvements in NGV technologies, drawing on Canadian innovations, can further enhance cost-effective emissions reductions. Electric drivetrains have been coupled with Class 8 natural gas trucks to deliver the first commercially available electrified options for heavy-duty transportation. Fleets in British Columbia, Ontario and Quebec have deployed electric natural gas hybrid trucks delivering significant emissions reductions and a pathway to net zero emissions in heavy-duty truck transportation. Innovations like these support meaningful reductions today while building a foundation for longer-term objectives.

Transportation in Canada an Environmental and Economic Challenge

During the pandemic Canadians came to appreciate the value of commercial transportation in their daily lives – keeping essential good available at local stores, collecting weekly refuse and delivering goods to their homes. Many trends that emerged during the COVID-19 pandemic may continue, but as more Canadians return to the new normal times we can expect an increase in goods transportation, transit use and commuting. All of these will contribute to higher post pandemic emissions. Current federal emissions reductions policies and regulations will increase the cost of transportation in Canada. Increased funds from carbon taxes must be reinvested in immediate emissions reductions in the transportation sector. To date planned investments in public transit are encouraging, but for the significant omission of funding for net zero emissions RNG transit. These policy oversights must be remedied.

Green Commercial Freight Program – $500 million

Canada's commercial freight sector is at a disadvantage relative to competitors in the United States, where a myriad of State and Federal funding programs incent the purchase of low emissions vehicles and the use of low emissions fuels. The State of California exemplifies how these can combine to support significant low emissions and net zero commercial freight. More than half the natural gas vehicles in North America operate in that state, fully 90 percent of these now use net zero RNG; and significant emissions reductions have been supported (400,000 tonnes from CNG and nearly 3 million tonnes with the use of RNG). It is time for Canada to invest low carbon and net zero carbon transportation.

Proposed New Funding Construct – Green Freight Deployment Program Natural Resources Canada

- Provide incremental vehicle purchase funding based on the costing and emissions ratios in the passenger vehicle (light duty) incentive program
- Funding based on vehicle range and application – more funds for vehicles that use more fuel and more for offsetting those that emit more
    - Class 8 truck $25,500
    - Refuse truck $20,000
    - Class 8 truck with hybrid electric drive $37,500
    - Electric drive-truck with onboard natural gas generation $66,500

Cost per tonne of emissions reductions will be around $300 – in line with the costs associated with passenger vehicle electrification. The funding envelope could accommodate other available technologies using a similar basis for funding – total envelope could unlock over 1.7 million tonnes of commercial transportation emissions reductions.

Public Transit Funding – $500 million

Current focus on 5,000 zero emissions buses is narrowly aimed at battery electric and hydrogen buses, and with an envelop of $4.2 billion, is on track to deliver emissions reductions at a cost per tonne that is much higher than any other transportation initiative. Omitting complimentary net zero RNG transit buses puts available emissions reductions opportunities at risk. Providing equivalent funding for RNG transit buses can deliver cost-effective emissions reductions to public and will extend the reach of net zero transit funding. This will support deployment of 1,000 new RNG transit buses and provide funding for RNG fueling of the current fleet of 1,000 CNG buses already operating in Canada.

Proposed funding construct:

- Provide full incremental cost funding for natural gas buses with an identified source of RNG to attain net zero emissions – estimated $95,000 per bus;
- Either provide RNG purchase support equivalent to the difference between the residential natural gas rate per gigajoule and the target RNG cost of $25 per gigajoule or;
- Provide RNG project development funding in the form of a fuel agreement for the life of the bus (10 to 15 years) based on the funding formula outlined above;

Cost per tonne of emissions reductions will be around $300 – in line with the costs associated with passenger vehicle electrification.

Marine LNG Funding – $500 million

The marine sector has not garnered much in terms of policy support to enable emissions reductions. International efforts such as those undertaken by the International Maritime Organization recognize that the challenges of supporting significant reductions and net zero emissions in this sector are substantial. Canada has been a leader in nurturing and deploying natural gas as a fuel in the marine sector, but this has occurred without much federal policy support. Although the total greenhouse gas emissions associated with domestic navigation are low when contrasted with on-road transportation, the development of natural gas bunkering – liquified natural gas (LNG) – will enable global shippers to increase the use of this low emissions marine fuel. More importantly LNG produced in Canada has a much lower carbon intensity than other global sources. The global marine supply chain needs more of Canada's LNG to support greater emissions reductions in this sector. Finally, in this post COVID 19 era, supporting the expansion of available LNG bunkering represents a significant new economic opportunity for Canada's ports.

Under Transport Canada's rubric of supporting the development and enhancement of key trade gateways, funding would be provided to port authorities, fuel bunkering suppliers or fuel vendors to develop and enhance LNG capacity at ports. This has the potential to unlock up to 1.5 million tonnes of greenhouse gas emissions reductions – including both domestic navigation and international navigations – and contribute to emissions reductions beyond Canada.

Proposed Funding Construct:

- Provide project funding based on a combination of net new LNG production and or net new LNG bunkering volumes made available at port facilities;
- Funding will be tied to the anticipated reduction in GHGs that will result from the use of LNG in domestic or international navigation;
- Funding will also be advanced for Canadian flagged vessels, new builds or conversions, that are equipped for LNG usage based on reductions in GHGs and in line with the funding principles applied to the light duty vehicle segment

Cost per tonne of emissions reductions will be around $300 – in line with the costs associated with passenger vehicle electrification.

Conclusion - Unlocking Opportunity

Securing long-term prosperity requires a clear view of vital Canadian interests. Canada's abundant energy resources are a cornerstone of our economy. When Canada effectively uses all these together with the best practices, we can not only export energy but also clean technologies and knowhow. Canadian should not make the mistake of pitting one type of energy against others – we need them all to remain prosperous and meet our emissions reductions goals.

Supporting Canada's transportation industry in managing both a transition to lower emissions and in adapting to life post COVID-19 is critically important to our economy. CNGVA has outlined program ideas that can support significant emissions reductions with the potential to leverage private sector support. More importantly these are measures that will not only enhance Canada's economic position in transportation, but they will support a sector that has contributed a large proportion of carbon tax and other emissions avoidance revenues without receiving any funding support in deploying low and net zero emissions technologies. It is time to remedy this inequity and to put Canada back on a competitive footing.