Federal Pre-Budget Submission 2023

List of Recommendations:

1.) Additional support for the freight sector through an enhanced and expanded Natural Resources Canada's Green Freight Program to deploy low emissions fleet technologies beyond 2027 – $300 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 in line with Canadian Urban Transit Research and Innovation Consortium research supporting this approach as a complimentary pathway for immediate public transit emissions reductions.

3.) Support Canadian marine leadership with strategic investments in liquefied natural gas (LNG) bunkering and in supporting maritime fleets converting to LNG and net zero emissions RLNG – $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 utilities and transportation fleets. Our mission is to support Canadian fleets in adopting cost-effective technologies to reach their emissions reductions goals.

Continued excess program funding focus on battery electric technologies is undervaluing opportunities to find immediate and lasting emissions reductions today. Contrasted with the approach taken in the United States, with Inflation Reduction Act, where all technology options are being funded to the benefit of the US economy, Canada's approach is too narrowly focused and is similarly not aimed at unlocking all clean energy options. Keeping up with a superior investment climate in the US for clean energy projects will be a significant challenge to overcome. In short, this will require inclusion of all the Canadian energy sectors, not just the electric sector. Heavy duty transportation is an example where these risks are significant, and where meaningful emissions reductions will require support for industry. Finally, the Clean Fuel Regulation – as the government's most recent emissions reduction approach – better reflects a policy rubric that can put Canada on a level footing with the US. The regulation itself has a limited reach, but technology neutral, life cycle emissions based programs are what is needed to accomplish the twin objectives of reducing emissions and unlocking economic opportunities.

Heavy Duty 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 low-cost 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 manufacturer 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 currently derive their primary business from the deployment of natural gas-based fuels, while all have expertise and products that will be used in hydrogen-based transportation. Renewable natural gas (RNG) is one of the most accessible and versatile drop-in fuels available today. 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 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. CNGVA members have announced plans to develop hydrogen technologies using natural gas platforms for their foundation. While zero emissions vehicle funding for public transit and heavy-duty vehicles anticipate hydrogen options, funding availability will likely expire before these products are commercially available.

Continued improvements in NGV technologies, drawing on Canadian innovations, can further enhance cost-effective emissions reductions. Electric drivetrains have been coupled with Class 8 NGV 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 hybrids 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

The current inflationary and supply chain crunch is tied to the COVID-19 pandemic but are also the logical extension of longer-term challenges in the global transportation market. Commercial transportation is and will continue to be a major source of emissions. Opting to force changes on this sector will exacerbate inflationary and supply chain pressures. Any approach to reducing transportation emissions must be cost-effective and must not disrupt ongoing shipping activities. At some future point in time battery electric vehicles may be able to meet that challenge – but this is not the case today. By contrast use of gaseous fuels can offer immediate emissions reductions, meet zero emissions objectives in less than five years, and will set the foundation for a variety of long-term zero and net zero emissions technologies. NRCan's Green Freight Program has the potential – on commercial transportation – begin matching the advantages that US based shipping firms already have. But this program needs more funding and needs to be viewed as equal in importance to any other vehicle deployment programs.

Public Transit has been heavily impacted by COVID-19 and now is groaning under the strain of rising costs, including energy costs. Many agencies are pleased to have the opportunity to advance capital projects with the support of federal transit funding. They don't want to bite the federal hand that is feeding them – but they and municipalities are preoccupied with curtailing operational costs that exceed operational revenues. This is not a time when beachhead technologies like battery electric and fuel cell electric transit buses can be easily managed. As a result, under current federal policies emissions reductions will be pushed off along with the deployment of these technologies. That is unfortunate as use of RNG can accomplish three municipal objectives simultaneously: reducing emissions; unlocking new economic opportunities through waste to energy conversions; and reducing transit operational costs without impacting service. These are the conclusions of a recent CUTRIC report – that recommends expansion of current federal transit and infrastructure funding to include RNG to support emissions reduction goals. Much like the CFR and Green Freight Program, what is needed to support public transit is a technology neutral life cycle based criteria for supporting emissions reductions.

Three actions to support cost-effective emissions reductions in transportation:

1.) Increase support for NRCan's Green Freight Program. The original budget envelope was a good start, but more funding is needed and more time is required to align with new products that will enter the market after 2024. More importantly the program must retain its emphasis on low cost-per tonne of emissions reduction and its use of life cycle emissions as a basis for technology and project funding. Another $300 million and extending the program to 2029, would put this program on par with the zero emissions heavy duty support program but would also facilitate equal or greater emissions reductions outcomes.
2.) Revising public transit and infrastructure support program for provinces and municipalities to include life-cycle based emissions reductions will give transit agencies more choice. This approach complements the original battery and fuel cell electric focus and will ensure emissions reductions targets are met sooner. This will go a long way to engender goodwill with municipal transit partners and will help municipalities open up new economic opportunities through waste to energy conversion with the use of RNG in transportation.
3.) Supporting LNG marine bunkering will keep Canada competitive in the supply chain and global shipping industry. Use of LNG in the marine sector offers an immediate opportunity to reduce emission and opens a viable pathway to net zero emissions with the use of RNG and other low and zero carbon gases. CNGVA's recent Arctic Marine LNG study illustrated how northern indigenous communities could unlock new economic opportunities while supporting a 20 percent net reduction in GHG from shipping. More investment in LNG bunkering can also help Canada provide its world leading LNG to support energy needs around the world. Investing $500 million will go a long way toward repositioning gaseous fuel exports and in reducing shipping emissions without increasing shipping costs and in some instances increase local economic activities.

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 to meet emissions reductions goals.

Supporting Canada's transportation industry in managing both a transition to lower emissions and in tackling inflation and supply chain challenges 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 that has thus far not received much funding support in deploying low and net zero emissions technologies. It is time to remedy this inequity and to put Canada back on a completive footing.