CANADIAN GAS ASSOCIATION
ASSOCIATION CANADIENNE DU GAZ

Submission to:

House of Commons Standing Committee on Natural Resources

c/o Clerk of the Committee

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Study: Low Carbon and Renewable Fuels Industry in Canada

From: Canadian Gas Association

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Summary

The reduction of greenhouse gas emissions is a core policy objective for the Canadian government. Low carbon and renewable fuels provide a decarbonization pathway for Canadaôs transportation, industrial and residential sectors. As the delivery agent for 35% of Canada energy needs, the natural gas delivery industry has a major role to play in assisting Canadaôs progress to reduce emissions, maintain energy affordability and resiliency. To date, the gas delivery industry has taken a leadership role to ensure that greenhouse gas (GHG) emissions from the use of our fuel are continually reduced. Measures include methane emission reduction programs, energy efficiency, natural gas for transportation and renewable gases ï including renewable natural gas (RNG) and hydrogen. Building on these positive steps, the Canadian Gas Association (CGA) and its members recommend closer integration and understanding with all levels of government on key issues facing the industry including:

1. regulatory standards
2. public investment
3. energy/technology neutrality in policy making and program funding.

Background

Canadaôs natural gas utilities provide 35% of the energy used by Canadians through more than 570,000 kilometers of underground infrastructure supplying more than 7 million homes, buildings and other structures across the country. Two-thirds of Canadians rely on the use of Canadaôs natural gas every day to meet their energy needs.

CGA members are diverse, including utilities, transmission companies, equipment manufacturers and suppliers. All these actors tirelessly maintain an expansive and sophisticated infrastructure network that delivers affordable and reliable gaseous energy. Increasingly, CGA members are integrating low carbon and renewable fuels such as hydrogen and renewable natural gas.

Current Situation

CGA members are advancing a variety of innovation solutions that will play foundational roles towards the Government of Canadaôs GHG emission reduction targets. For this submission we are focused on RNG and hydrogen. On this note, two major actions have already been undertaken. First, requests have been made by the Government of Canada for information regarding the feasibility, pricing and availability of RNG for federal buildings. The Greening Government initiative was enhanced in Budget 2021 to include low carbon fuels for government operations. CGA has provided a detailed overview of the RNG opportunity across Canada and the GHG emission reductions and costs that could accrue from federal leadership in RNG producing for federal buildings. For context, already a series of National Defense facilities in Quebec are purchasing RNG from Energir. Further, the Centennial Flame on Parliament Hill is

fueled by RNG. Second, the CGA has established the Natural Gas Innovation Fund, a venture capital fund, to invest in promising cleantech projects that develop solutions to enhance innovation and environmental performance in the natural gas sector. Both initiatives ensure a seamless and innovative transition to decarbonization and renewable fuels by investing in emerging technologies and utilizing an existing energy infrastructure network Canadians know and trust. NGIF is funding a number of innovative RNG and hydrogen projects in partnership with industry, governments (including the federal government), and private financers.

In addition to the above, CGA members have identified nearly 70 emission reduction-based projects across Canada, with 21 of these projects specifically oriented around RNG and hydrogen. Moreover, recent policy developments like the Clean Fuels Fund and proposed funding for carbon capture and storage in the 2021 Federal Budget, are positive signs that further cooperation between the natural gas industry and the government are necessary to meet policy goals.

Recommendations/Advice

Three recommendations can be made to enhance public-private cooperation. First, existing provincial regulatory frameworks that enable utility investments should be amended to allow utilities to invest in and recovery costs for large scale GHG emission reduction projects. At current, economic regulators are only examining capital expenses that deliver the lowest costs for consumers. This is a result of the legislation that underpins utility investments ï referred to as Utility Acts. These legislative frameworks pose challenges to utilitiesô efforts and initiatives to reduce emissions as there is no assurance that a utility GHG emission reduction project filing would be approved. Investments that facilitate a greater use of RNG and hydrogen may result in slightly higher costs for consumers, but also represent one of the foremost opportunities for industry to reduce customer GHG. We recommend the federal government work with the natural gas delivery industry and provincial and territorial governments to discuss a process to reform utility legislation that would enable predictable, scalable investments in GHG emission reduction projects. One such opportunity for this discussion is the annual Energy Mines and Minister meeting. We recommend this issue be put on the EMMC agenda.

Second, Canada requires more public-private cooperation on cleantech development. Through the NGIF, the CGA has managed to establish an excellent industry-funded platform for innovation, and the governmentôs willingness to partner in this venture is encouraging. However, deeper integration will be integral in advancing the interests of both the public and private sectors. The new NGIF Cleantech Ventures initiative offers an opportunity to do so. This equity fund, which is supported by seven leading companies across the natural gas value chain, invests in promising technologies across the entire natural gas value chain from production through end use and carbon capture use and storage. These investments will further improve the natural gas industryôs environmental performance. We recommend government enhance its partnership with

NGIF by leveraging the NGIF funding and due diligence model to support natural gas and renewable gas (including RNG and hydrogen) technology solutions across the natural gas value chain.

Lastly, policy leadership at all levels of government should always strive to be technology and fuel neutral and avoid picking winners. Such practices ignore the headway that CGA members have made in researching and developing low carbon and renewable fuel solutions. An example of this is seen with the Canadian Infrastructure Bankôs (CIB) decision to exclude RNG-fueled buses and exclusively invest in hydrogen and battery buses. This is unfortunate, as the use of RNG-fueled buses in Hamilton, along with Translinkôs recent introduction of an RNG bus fleet in Vancouver, clearly demonstrate a sustained level of municipal interest, and a growing understanding that low carbon and renewable fuels such as RNG offer a viable means for reducing GHG emissions. Moreover, the exclusion of natural gas technology solutions from the Canada Greener Homes Grant (CGHG) further exemplifies the need for neutrality in technological innovation funding. We recommend the government maintain fuel and technology neutrality in all programming and amend their CGHG program to allow natural gas heating equipment to be eligible for rebates. Further, we recommend government amend its CIB programming to allow RNG buses to apply for program funding. In doing so, government will maintain policy consistency with regulatory and program measures including the clean fuel standard and its $1.5 billion clean fuel fund, both which support RNG.

Additional Information (as requested by the Committee)

For residential consumers in Canada, the cost difference between heating with electricity and natural gas is significant. With an electric furnace that runs at 100% efficiency, the average annual energy consumption would be 23,018 kWh costing on average $2,762.16 (@ an average cost of $.12/ kwh). With a natural gas furnace that runs at 90% efficiency, this figure stands at approximately 50,328 kWh costing an annual average of $1,509.84 (and an average cost of $.03 /kwh).

A member of the Committee was also interested in provincial natural gas usage. Canada consumed an average of 11.2 Bcf/d of natural gas in 2018. The largest consumers of natural gas were Alberta at 6.2 Bcf/d, followed by Ontario and B.C. at 2.7 Bcf/d and 0.7 Bcf/d, respectively. Canadaôs largest consuming sector for natural gas was the industrial sector, which consumed 7.8 Bcf/d in 2018. The residential and commercial sectors consumed 1.9 Bcf/d and 1.5 Bcf/d, respectively.

For consumers, switching to electric heat sources has the potential to increase costs by nearly four times, depending on the electricity price profile in their jurisdiction. The attached table outlines this in detail.

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Canadian Consumer Energy Costs – Electricity vs Natural Gas and Carbon Pricing

2019 Average Residential Natural Gas and Electricity Prices in Canada (Cents/KWh)

2019	Natural Gas[1]	Natural Gas[1]	Carbon Tax	2021 Natural Gas Rates (with Carbon Tax as at 2021)[2]	2030 Natural Gas Rates (with $170 Carbon Tax)[2]	Electricity[1,3]
	$/GJ	Cents/KWh	Cents/KWh	Cents/KWh	Cents/KWh	Cents/KWh
Edmonton, AB	6.55	2.36	0.735	3.09	5.48	14.68
Regina, SK	7.97	2.87	0.735	3.60	5.99	16.51
Winnipeg, MB	8.07	2.90	0.735	3.64	6.02	9.37
Toronto, ON	8.81	3.17	0.735	3.91	6.29	13.89
Vancouver, BC	9.02	3.25	0.879	4.13	6.57	11.62
Montreal, QC	16.00	5.76	0.339	6.10	9.08	7.30
Moncton, NB	18.32	6.59	0.735	7.33	9.71	13.10
Halifax, NS	21.90	7.88	0.412	8.29	11.20	16.69

Footnotes

1. Amounts are without tax which indicates the commodity price without HST, GST and PST

2. Carbon Tax for the provinces are calculated as follows:

For AB,ON, MB, NB, SK:

$0.0783/m3 (2021 OBPS gas fuel levy) / 0.0383 GJ/m3 =$ 0.735 cents/kWh

At 170 $/tCO2e, using cost of 40 $/tonne in 2021 and prorating it = 3.12 cents/kWh

For BC:

45 $/tCO2e (2021 price) x 0.0543 tCO2e/GJ (Based on 2020 Canadian NIR) = $0.879 cents/kWh

170 $/tCO2e = 3.32 cents/kWh

For QC:

$17.36/tCO2e (2021 floor price) x 0.0543 tCO2e/GJ (Based on 2020 Canadian NIR) = $0.339 cents/kWh

170 $/tCO2e = 3.32 cents/kWh

For NS:

$21.09/tCO2e (2021 floor price) x 0.0543 tCO2e/GJ (Based on 2020 Canadian NIR) = $0.412 cents/kWh

170 $/tCO2e = 3.32 cents/kWh

3. https://www.hydroquebec.com/data/documents-donnees/pdf/comparison-electricity-prices.pdf