



Driving Productivity and Competitiveness with Natural Gas Canadian Gas Association 2018 Pre-Budget Submission

The Canadian Gas Association (CGA) represents Canada’s natural gas delivery companies. It welcomes the opportunity to share its natural gas solutions to help meet the economic and environmental priorities of Canadians.

The Government of Canada has focused its 2018 budget priorities on initiatives to help Canada be more productive and competitive. In order to achieve this, our country requires access to clean, reliable and affordable natural gas.

For over 100 years, natural gas delivery companies have been meeting the energy needs of Canadians. Through over 450,000 kilometers of transmission and distribution gasline, supported by a robust energy storage network, natural gas is delivered to just under seven million unique residential, commercial and industrial customer locations (see Map 1 in Appendix 1). Ultimately, over half of all Canadians benefit from affordable, clean burning, safe, and reliable natural gas solutions to heat buildings, generate electricity, fuel vehicles, and power appliances. Today, natural gas meets 36% of Canada’s energy needs.

CGA’s Pre-Budget Submission focuses on six solutions where the natural gas delivery industry can assist the Government of Canada on its agenda:

1. Enhancing energy efficiency
2. Connecting new communities to natural gas pipelines
3. Partnership in energy innovation
4. Supporting low emission natural gas transportation
5. Supporting Canada’s off-diesel strategy with natural gas
6. Increasing production of renewable natural gas

We look forward to working with federal departments to deliver these natural gas solutions to Canadians.

Sincerely,

Timothy M. Egan
President & CEO
Canadian Gas Association

Driving Productivity and Competitiveness with Natural Gas

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Part 1: Natural Gas Solutions to Help Canadians be more Productive:

Solution 1: Enhanced Energy Efficiency

Overview: Canada's natural gas utilities deliver energy efficiency programs for customers across Canada. Through rebates on high efficiency equipment, energy audits, and conservation information, utilities have invested over \$1.2 billion since the year 2000, saving customers over \$1.2 billion in fuel costs and reducing customer emissions by over 55 megatonnes. Federal leadership through NRCan's Office of Energy Efficiency, Office of Energy Research and Development, and CanmetENERGY, has been instrumental in providing gas utilities with program funding, data and analytic platforms, third party validated information and technology expertise.

Recommendations:

- The Government of Canada should:
 - leverage provincial and utility energy efficiency organizations and funding already in place, with federal funding through the Low Carbon Economy Fund or new funding to deliver deep retrofits (and labelling) in the residential sector, including for low income Canadians and Indigenous communities.
 - leverage existing platforms such as the EnerGuide Rating System, HOT-2000 and Portfolio Manager to support this new funding.¹
 - enhance energy efficiency by mandating all federal buildings to participate in available utility programs as they undergo retrofits or prior to new construction.
 - use its existing communication channels and work with the provinces and utilities to promote energy efficiency and program availability for Canadian homeowners and businesses.

Solution 2: Connecting Communities to Natural Gas

Overview: Nearly seven million family homes, businesses and industries across Canada are without access to natural gas due to their small community size and/or distance from the pipeline network. Consumers in these regions often depend on more expensive, less reliable, and higher emitting energy options. In the recent past, the Government of Canada has matched funding from provinces and utilities to support new pipeline connections in [Red Lake, Ontario](#); [Thetford Mines, Asbestos](#) and [Bellechasse](#), Quebec. CGA members have identified communities where co-funding would allow the extension of the pipeline. ICF International quantified the environmental and economic benefits of expanding natural gas distribution pipelines in a 2015 [report](#). The report concludes that over a 25-year period, a cumulative reduction in CO₂ of 1.87 million tonnes would be achieved and a new natural gas residential customer would achieve fuel cost savings of \$25,000 over the life of the gas heating equipment. In order to realize the benefits there is a requirement for co-funding of pipeline connection projects for these particular communities.

¹ EnerGuide for Houses had an 84% national net program savings, which confirms the effectiveness of utilizing the ERS to drive deep retrofits (Source: Bronson Consulting Group report for NRCan *Analysis of Net to Gross Survey Results for the ecoEnergy Retrofit for Homes Program* August 20, 2010).

Recommendations:

- The Government of Canada should:
 - include natural gas pipelines as eligible for federal infrastructure programs.
 - co-fund, with provincial governments and gas utilities, the construction of new infrastructure to deliver affordable, cleaner energy to families and businesses currently not serviced.

Part 2: Natural Gas Solutions to Help Canadian Businesses be more Productive and Competitive:**Solution 3: Partnership in Energy Innovation**

Overview: Canada's natural gas utilities have a long history of partnering with organizations such as CanmetENERGY, the National Research Council, the Natural Gas Technology Centre, and the Gas Technology Institute to support the testing, demonstration, and development of innovative technologies. In 2016, the Natural Gas Innovation Fund™ (NGIF) was created by CGA to support further funding of cleantech innovation in the natural gas value chain. NGIF has invested \$5.4 million, leveraging \$41.2 million from industry and government, in a range of natural gas cleantech projects. NGIF is looking to cooperate with governments to support its priorities, and bring forward natural gas solutions to challenges identified under the Government of Canada's Mission Innovation initiative.

Recommendation:

- The Government of Canada should work with NGIF to share information and examine where their respective funding processes can be streamlined and harmonized. This will allow for enhanced deal flow, improved applicant processes, and help efficiently leverage public monies.

Solution 4: Supporting Low Carbon Dioxide Emission Natural Gas Transportation

Overview: Natural gas is being used or demonstrated in many modes of transportation, including heavy duty and medium duty trucks, rail, marine, off road, transit, and fleets. The adoption of natural gas in the transportation sector is driven by several factors including lower fuel costs and emissions and the availability of new engine and vehicle technology. However, adoption of natural gas for transportation use in Canada has been growing at a relatively modest pace because of higher capital cost for natural gas vehicles, marine vessels and equipment, and the lack of widespread refueling infrastructure.

Natural gas offers significant benefits to the environment with minimal NO_x, SO_x, and particulate matter emissions and up to 20% lower GHG emissions over conventional fuels. Examples of government support for natural gas as a transportation fuel include:

- In the 2016 and 2017 Budgets, the Government of Canada allocated \$62 million and \$120 million respectively to support the deployment of low emission refueling infrastructure.
- In British Columbia, the government allows natural gas utilities to offer incentives for fleets to adopt natural gas. Numerous fleet operators have used incentives from FortisBC to purchase natural gas-fueled vehicles.
- In Quebec, the government has provided incentives to purchase LNG trucks. The depreciation rate applicable to commercial trucks or tractors was increased from 40% to 60% and an additional 85% cut for amortization reduction was granted if it runs on liquefied natural gas (LNG).
- In Ontario, the government has allocated \$220 million to support incremental vehicle costs and to scope a program on infrastructure development and vehicle incentives.

Recommendations:

- The Government of Canada should:
 - recognize in policy statements and speeches that natural gas is a clean and affordable alternative transportation solution for municipal transit, medium and heavy duty on road, marine, off road, remote power generation and rail applications.
 - support the development and updating of a Canadian life cycle assessment tool, such as GHGenius, to ensure an accurate and predictable means of measurement continues to support government policy objectives.
 - include natural gas fueling infrastructure and facility upgrades for municipal and provincial fleets and at ports as eligible costs for federal infrastructure funding through federal-provincial agreements.
 - help de-risk the upfront cost of natural gas transportation equipment compared to the petroleum fuel equivalent through incentives that cover a portion of the cost of natural gas vehicle, marine, or rail engines and fuel systems or other means to reduce the capital burden of adopting NGVs.
 - partner with the private sector to ensure next generation natural gas vehicle technologies, such as high horsepower technologies, are developed and deployed in Canada to address unique challenges faced by the transportation sector.

Solution 5: Supporting Canada's Off-Diesel Strategy with Natural Gas

Overview: The Government of Canada is developing an off diesel strategy for Canada's North. Significant funding was announced in Budget 2017 including the \$400 million Arctic Fund and the south of 60 fund of \$220 million. Remote communities and industry rely on diesel, propane, or other fuels for energy needs, which can present a variety of issues including higher GHG emissions and the risks of fuel spills/leaks. Further, much of the diesel infrastructure is currently due for replacement due to age.

A cleaner, more affordable solution than diesel fuel is LNG, which is produced when natural gas is cooled to -162 degrees Celsius. When liquefied, its volume is reduced 620 times compared with natural gas at normal pressure. LNG can then be safely transported in storage tanks to industrial facilities or northern communities where it can be used for heat and/or electricity. Examples of this include:

- LNG from Alberta is trucked to Whitehorse, as well as a power plant in Inuvik, as a cleaner alternative to diesel.
- In BC, Anahim Lake uses LNG from FortisBC's facility in Delta to substitute diesel for the First Nation community.
- In northern Quebec, LNG is trucked from Montreal to the Stornoway Diamond Corp.'s Renard Mine and used for power generation and underground mine heating.

Recommendations:

- The Government of Canada should:
 - include northern LNG projects within the eligibility criteria for federal northern infrastructure funding programs (south of 60 and north of 60)
 - work with industry to develop and deploy pilot projects to showcase LNG as a sustainable alternative to diesel for northern and remote communities.

Solution 6: Increase Production of Renewable Natural Gas (RNG)

Overview: RNG is a 100% renewable source of natural gas produced using organic waste from farms, forests, landfills, and water treatment plants. The raw gas from these sources is captured, processed, and then blended in existing natural gas distribution pipelines and used in the same way as conventionally produced natural gas. As a carbon neutral fuel, RNG can assist communities and governments in meeting their GHG emission reduction and energy sustainability targets. Canada has the opportunity to be a world leader in the production of RNG, improving and deploying this clean energy technology here and abroad to reduce emissions and support economic growth.

The RNG production potential for Canada is equivalent to 1,200 billion cubic feet per year –a little more than 50% of Canada’s 2014 natural gas consumption. RNG can be produced, cleaned and blended into the natural gas system at competitive costs compared to other renewable energy options (Costs are \$10-25 per gigajoule, or 4-9 cents per kilowatt hour.). Canada’s natural gas utilities have set a target of incorporating RNG volume equivalent to 5% of total natural gas volumes into the gas system by 2025 and 10% by 2030, resulting in 14 megatonnes (MT) of GHG emission reductions per year by 2030.

By the end of 2017, utilities will have brought online 12 RNG projects, equaling the energy needs of 55,000 homes. British Columbia, Ontario and Quebec have approved or are examining RNG renewable portfolio standards.

Recommendations:

- The Government of Canada should:
 - match provincial RNG program contributions (e.g., \$100 million in Ontario, funded by the carbon cap and trade revenues).
 - introduce a dedicated \$50 million “Green Pipeline Fund” to connect RNG supplies from farms, landfills and forestry operations to the Canadian gas infrastructure network.
 - support the development of RNG technology, focusing on converting forest and agricultural waste to RNG.
 - exempt RNG from emission reduction taxes when sold within Canada.
 - consider other tax relief mechanisms to encourage development of infrastructure (e.g. tax credits for RNG project developers).

Appendix 1.

Map 1. Canadian Gas Association Members

