

CANADIAN GAS ASSOCIATION

2016 PRE-BUDGET SUBMISSION

HELPING MIDDLE CLASS FAMILIES, GROWING THE
ECONOMY, DRIVING INNOVATION



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ASSOCIATION CANADIENNE DU GAZ

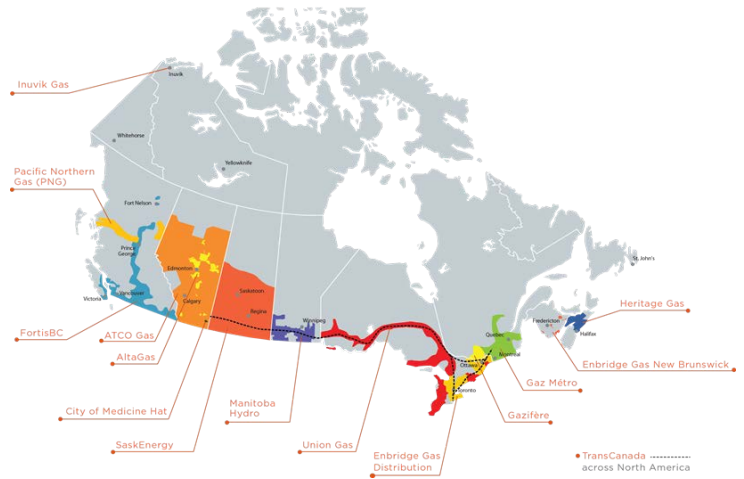
Helping Middle Class Families, Growing the Economy, Driving Innovation Canadian Gas Association 2016 Pre-Budget Submission

Executive Summary

The Canadian Gas Association (CGA) pre-budget submission outlines recommendations that support what we refer to as *Canada's Natural Gas Opportunity* - specific areas where natural gas and the natural gas distribution industry, in partnership with governments, can support Canadian families, grow the economy, and reduce emissions.

Background:

For more than a century, natural gas distribution companies, illustrated in the map, have been meeting the energy needs of Canadians. With over 450,000 kilometres of transmission and distribution pipeline as well as above ground and underground storage facilities, natural gas is delivered to over 6.6 million customer locations. This means that over 20 million Canadians rely and benefit from affordable, clean, safe, and reliable natural gas to heat homes, schools, hospitals and businesses, generate electricity, fuel vehicles, and power appliances. The investment in this infrastructure and commitment to customers has played an important role in helping Canadians achieve the quality of life which we enjoy today.



But there is an opportunity for more Canadian homeowners, institutions, and businesses to benefit from natural gas. This is because:

- Natural gas has always been affordable, but these savings are even more noticeable for consumers facing rising costs for other energy commodities and services. Natural gas could have delivered \$2,000 - \$3,000 in savings per household in 2015 if chosen over other energy options (electricity, propane, and heating oil) for space and water heating.
- Natural gas is an efficient and clean burning energy choice with fewer emissions than many other fuels. As well, natural gas is an important partner for renewables and emerging low emission technologies.
- Natural gas distribution companies are innovators. Across the country, natural gas utilities have a long history of supporting energy efficiency programs and driving innovation in energy end-use technology.

The Opportunity:

The *Natural Gas Opportunity* speaks to:

- Helping Canadian families and businesses save money on energy costs;
- Helping Northern and remote industry and communities, including Indigenous communities, have access to more affordable, clean, safe and reliable energy;
- Supporting market transformation in the heavy duty, return-to-base, off-road, and marine transportation sectors to a cleaner, more affordable fuel;
- Developing new partnerships that drive energy efficiency and energy technology innovation.

Summary of Recommendations:

Help Canada's middle class families and small businesses in communities across Canada by:

- Allocating \$250 million in clean energy infrastructure funding to support, in partnership with provincial governments and utility private capital, the construction of new natural gas infrastructure to deliver more affordable, cleaner energy to Canadian families and businesses not currently on the pipeline system helping them move off of higher emitting fuels for space and water heating, and to save on energy costs.
- Allocating \$50 million of clean energy infrastructure funding to support, in partnership with provincial and territorial governments and utility private capital, the delivery of a more affordable energy option (LNG) to Indigenous communities and industry in Canada's North.

Support the greater use of natural gas as an affordable, clean transportation fuel for heavy duty and medium duty trucks, rail, marine, off road and transit by:

- Allocating \$650 million over five years to help de-risk the upfront cost of natural gas vehicles (NGV's) compared to the diesel equivalent by providing incentives that cover a portion of the incremental cost of natural gas vehicle, marine, or rail engines to encourage deployment
- Allocating \$250 million over five years of clean energy infrastructure funds to partner with provincial governments and the private sector to support the development of natural gas re-fueling infrastructure across Canada. Encouraging private investment in refueling infrastructure facilitates natural gas use as a transportation fuel and the location of Liquefied Natural Gas (LNG) across Canada for power generation in remote communities.
- Providing certainty around maintaining the current federal fuel tax exemption on natural gas (LNG and Compressed Natural Gas (CNG)) as a fuel until natural gas vehicles have a viable share of the fleet market.

Support the increased production of Renewable Natural Gas (RNG) in Canada by:

- Allocating \$75 million in clean energy infrastructure funding to partner with natural gas utilities and municipal and provincial governments to increase the development of new RNG facilities.
- Allocating innovation funding to support the development of RNG technology, focusing specifically on forest and agricultural waste gasification.

Drive energy efficiency and innovation by:

- Allocating \$250 million to support home and small business energy efficiency retrofits. In doing so, the government should explore various forms of financial support that will leverage utility low income energy efficiency programs currently delivered across Canada. This funding could aim to assist with contractor/labour costs associated with making energy efficiency improvements.
- Partnering with Indigenous communities to support the efficient delivery and use of energy in Northern communities served by natural gas and with potential to be served by natural gas.
- Allocating \$100 million to fund end-use energy technology in partnership with provinces and utilities.

Enhance information sharing and collaboration on cyber security by:

- Enhancing funding for the National Energy Information Technology Centre (NEITC) industrial control system related initiatives and other joint government-industry cyber security initiatives.

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Introduction

The Canadian Gas Association (CGA) is the voice of Canada’s natural gas delivery industry and our members are distribution companies, transmission companies, equipment manufacturers and other service providers. The product and extensive delivery system together offer an incredibly cost-effective means to deliver on key objectives related to infrastructure development, innovation, emissions reductions, the North, and economic growth.

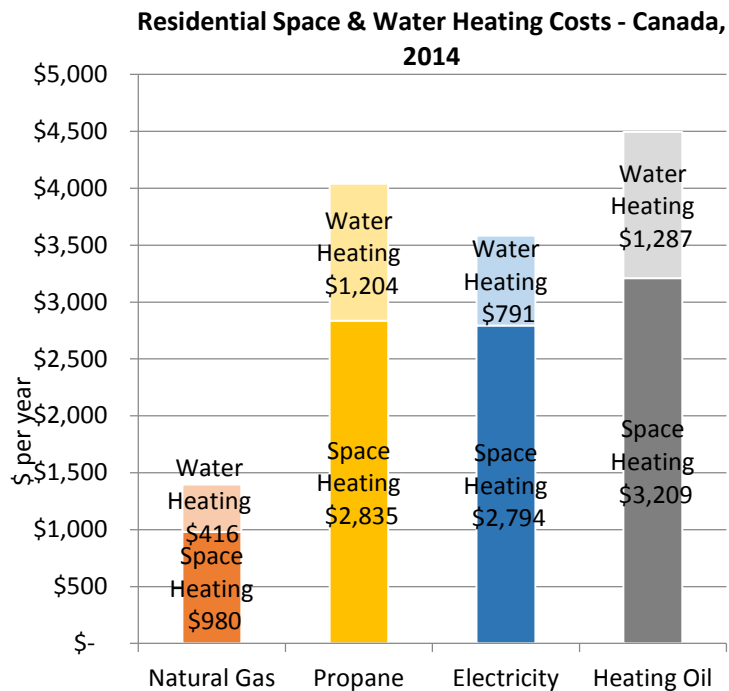
Below are a number of recommendations where the natural gas distribution industry can work with the government in support of improving the lives of Canada’s middle class and Indigenous communities, grow the economy and protect the environment.

1. How can the Government of Canada better support Canada’s middle class?

For more than a century, natural gas distribution companies have been meeting the energy needs of Canadians. Today, with over 450,000 kilometres of transmission and distribution pipeline as well as above ground and underground storage facilities, natural gas is delivered to over 6.6 million customer locations. This means that over 20 million Canadians rely and benefit from affordable, clean, safe, and reliable natural gas to heat homes, schools, hospitals and businesses, generate electricity, fuel vehicles, and power appliances. The investment in this infrastructure and commitment to customers has played an important role in helping Canadians achieve the quality of life which we enjoy today.

Natural gas has always been affordable, but today technological innovation is making greater quantities available than ever before for the Canadian marketplace, making this resource more affordable still. The savings are even more noticeable for consumers in the face of rising costs for other energy commodities and services. Natural gas helped to deliver \$2,000 - \$3,000 in savings per household in 2015 when natural gas was chosen over other energy options (electricity, propane, and heating oil) for space and water heating.

However, there remain a significant number of family homes and businesses in communities across Canada who do not have access to natural gas and are dependent on more expensive, less reliable, and higher emitting energy options. As well, many Indigenous and other very remote communities and large industrial projects in Canada’s far North (e.g., mines) would benefit significantly from liquefied natural gas (LNG) as an alternative to more expensive and higher emitting diesel fuel for power generation and/or heating needs. In the Maritime Provinces, rapidly declining offshore production, and limited pipeline infrastructure, has also limited the ability for this region to see the benefits of natural gas enjoyed by most other Canadian provinces.



A 2015 report completed by ICF International titled “*Economic and Emissions Benefits of Expanding Natural Gas Distribution Pipelines to Canadian Consumers*” forecasted the benefits of expanding natural gas distribution pipelines to communities.¹ The report concludes that:

- The average new natural gas residential customer would achieve annual fuel cost savings of \$1,619 per year, or more than \$25,000 over the life of the gas heating equipment.
- Over a 25 year period, these expansion projects would contribute \$1.7 billion to Canada’s GDP, contribute support of 31,500 net job-years, and increase government revenues by over \$600 million.

In order to realize the benefits outlined by ICF International, there is a requirement for co-funding of pipeline connection projects for Canada’s rural and agricultural communities. A number of utilities are working to modify the funding mechanisms in their province to allow more flexibility in connecting consumers to natural gas by building pipelines.

For example, Union Gas, a natural gas distribution company in Ontario, submitted a proposal in 2015 to the Ontario Energy Board to allow the extension of natural gas service to 29 rural and Indigenous communities, helping residents and businesses save on their energy costs and lowering GHG emissions by the equivalent of removing about 2,700 cars from the road. Discussions continue on this particular proposal, but similar opportunities exist across Canada if funding support is made available to assist with the costs of expanding the infrastructure.

Recommendation:

Help Canada’s middle class families and small businesses in communities across Canada by:

- Allocating \$250 million in clean energy infrastructure funding to support, in partnership with provincial governments and utility private capital, the construction of new natural gas infrastructure to deliver more affordable, cleaner energy to Canadian families and businesses not currently serviced by the pipeline system helping them to move off of higher emitting fuels for space and water heating, and to save significantly on energy costs.
- Allocating \$50 million of clean energy infrastructure funding to support, in partnership with provincial and territorial governments and utility private capital, the delivery of a more affordable energy option (LNG) to Indigenous communities and industry in Canada’s North.

2. What infrastructure needs can best help grow the economy, protect our environment and meet your priorities locally?

In addition to the infrastructure recommendation noted above that directly benefits families, institutions, and businesses, there are significant opportunities to support economic growth and advance environmental objectives in the transportation sector and by increasing the production of Renewable Natural Gas (RNG). Two opportunities are outlined below.

Support the Development of a Domestic Market for Natural Gas as an Affordable, Clean Transportation Fuel

Natural gas is being used or demonstrated in many modes of transportation including heavy duty and medium duty trucks, rail, marine, off-road and transit. Natural gas is an ideal fuel option in these markets – offering significant cost savings, minimal NOx, SOx, and particulate matter emissions, and lower GHG emissions (up to 25 per cent) over conventional fuels.

¹ ICF International, “Economics and Emissions Benefits of Expanding Natural Gas Distribution Pipelines to Canadian Consumers”, November 2015.

Recommendation:

Support the greater use of natural gas as an affordable and clean transportation fuel for heavy duty and medium duty trucks, rail, marine, off road, and transit by:

- Allocating \$650 million over five years to help de-risk the upfront cost of NGV's compared to the diesel equivalent by providing incentives that cover a portion of the incremental cost of natural gas vehicle, marine, or rail engines to encourage deployment.
- Allocating \$250 million over five years in clean energy infrastructure funds to partner with interested provincial governments and the private sector to support the development of natural gas re-fueling infrastructure across Canada. Encouraging private investment in refueling infrastructure will facilitate greater use of natural gas as a transportation fuel, but also enable the strategic location of LNG across Canada for other domestic uses (e.g. for power generation in remote communities, etc.)
- Providing certainty around maintaining the current federal fuel tax exemption on natural gas (LNG and CNG) as a transportation fuel until natural gas vehicles have a viable share of the fleet market.

Support Production of Renewable Natural Gas (RNG) in Canada

RNG is a 100 per cent renewable natural gas produced from organic waste from farms, forests, landfills, and water treatment plants. The gas is captured, cleaned, and injected in pipelines to be used in the same way as natural gas in homes, businesses, institutions, and industries. As a CO₂ neutral fuel, RNG can assist communities and governments in meeting their greenhouse gas (GHG) emission reduction and energy sustainability targets. Further, because RNG is produced from local waste sources, it supports local economic opportunities in a range of sectors, including agriculture and forestry.

The RNG production potential for Canada is significant. Estimates in a report completed by the Alberta Research Council suggest Canadian potential is equivalent to 1,300 billion cubic feet per year – equal to supplying 6 million Canadian homes.² Harnessing even 10 per cent of Canada's RNG potential would generate enough clean energy to heat 1 million Canadian homes for a year.

Canadian natural gas utilities are well positioned to be leaders in supporting RNG using the existing gas pipeline infrastructure and natural gas equipment without significant new investment. Several Canadian gas utilities have partnered with provincial governments, the private sector, or municipalities to build RNG facilities. These include landfill and farm-based projects in British Columbia, a waste water project in Ontario, and landfill and municipal digester projects in Quebec. Indeed, Canada has the opportunity to be a world leader in the production of RNG as well as improving and deploying this clean energy technology here and abroad.

Recommendation:

Support the increased production of RNG in Canada by:

- Allocating \$75 million in clean energy infrastructure funding to partner with natural gas utilities and municipal and provincial governments to increase the development of new RNG facilities.
- Allocating innovation funding to support the development of RNG technology, focusing specifically on forest and agricultural waste gasification.

² Alberta Research Council, "Potential Production of Methane from Canadian Wastes", 2008.

3. How can we create economic growth, protect the environment and meet local priorities while ensuring that the most vulnerable don't get left behind?

Drive Energy Efficiency and Innovation

Natural gas distribution utilities have been developing successful energy efficiency programs for their residential, commercial and industrial customers for more than 20 years. These programs help customers invest in more efficient equipment and provide energy saving tips which result in lower energy costs for homeowners and increased productivity and competitiveness for industry. By helping reduce natural gas consumption, efficiency programs result in lower emissions and help ensure the responsible use of Canadian resources. Since the year 2000, utilities have invested \$1 billion in their energy efficiency programs, saving \$1 billion in natural gas costs and reducing customer emissions by 50 megatonnes. Even more can be done to further improve the energy use in homes and buildings in Canada.

Further, Canada's natural gas utilities have been increasing support for end-use energy technology innovation. Partnering with organizations such as Sustainable Development Technology Canada (SDTC), the National Research Council (NRC), the Natural Gas Technology Centre, the Gas Technology Centre, and the American Gas Association new innovative technologies are being tested, demonstrated, and developed. Combined heat and power (CHP), micro CHP, power-to gas, NGV engine, and RNG are amongst the technologies being looked at given their potential to support the delivery of more affordable and efficient energy to customers.

Recommendations:

Drive greater energy efficiency and investment in energy innovation by:

- Allocate \$250 million to support home and small business energy efficiency retrofits. In doing so, the government should explore various forms of financial support that will leverage utility low income energy efficiency programs currently delivered across Canada. This funding could aim to assist with contractor/labour costs associated with making energy efficiency improvements.
- Partner with Indigenous communities to identify opportunities to support the efficient delivery and use of energy in Northern communities already served by natural gas and also with potential to be served by natural gas.
- Allocate \$100 million to fund innovation in end-use energy technologies in partnership with provinces and utilities.

Enhance Information Sharing and Collaboration on Cyber Security

Information technology and industrial control systems (ICS) supporting the safe and reliable delivery of natural gas are susceptible to increasingly sophisticated, coordinated, and persistent cyber-attacks. The natural gas distribution industry continuously monitors their IT systems and implements measures to protect against such attacks. As well, CGA leads on a number of cyber security initiatives alongside our industry and government partners. CGA has developed a strong partnership with a number of key federal departments including Public Safety Canada, and Natural Resources Canada (NRCan). CGA and NRCan participate as co-chairs of the Energy and Utilities Sector Network (EUSN) which supports the National Energy Infrastructure Test Centre (NEITC) that facilitates industrial control system (ICS) assessment and compliance, technology testing, the exchange of best practices, and information sharing on cyber security. These joint initiatives that bring all stakeholders together are key to maintaining the security and resiliency of utility delivery systems and protecting against growing threats.

Recommendation:

Enhance information sharing and collaboration on cyber security by:

- Enhance funding for the NEITC industrial control systems related initiatives and other joint government-industry cyber security initiatives.

4. Is the implementation of these new priorities and initiatives realistic? Will it help us grow our economy?

The natural gas distribution industry is well established with a long history of investing in Canada's extensive natural gas delivery system, design and delivery of energy efficiency programs, and energy technology innovation. Natural gas utilities are stable, experienced, and knowledgeable partners who stand ready to fully support implementation of the recommendations described above. We note that natural gas utilities:

- Operate an extensive natural gas distribution pipeline network in thousands of Canadian communities. Over the past decade natural gas utilities have invested over \$16.7 billion in this pipeline network - in 2014 alone spending just over \$3.7 billion dollars on new capital projects and the operation and maintenance of the existing pipeline and distribution systems. Committed to maintaining and growing their systems, further utility investments can be expected.
- Have been developing successful energy efficiency programs for their residential, commercial and industrial customers for more than 20 years. These programs help customers invest in more efficient equipment and provide energy saving tips which result in lower energy costs for customers and increased productivity and competitiveness for industry. In addition to helping reduce natural gas consumption, efficiency programs help lower emissions and the responsible use of Canadian resources.
- Have partnered with governments on the successful implementation of community pipeline extension projects in the past.
- Have collaborated with a number of partners (Natural Resources Canada, Sustainable Development Technology Canada, the National Research Council, the Natural Gas Technology Centre, the U.S. Gas Technology Centre, the American Gas Association, etc.) on initiatives to drive energy efficiency and the development and deployment of innovative end-use technology.
- Are increasingly identifying international opportunities for collaboration to build on our domestic innovation and find new ways to work with the world on delivering clean and affordable, safe and reliable energy.

Canada's natural gas distribution industry believes it can help the Government of Canada deliver better environmental performance and stronger economic growth, and wants to pursue the opportunity.

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