



CGA's Vision 2050

About the Canadian Gas Association

CGA is the voice of Canada's natural gas delivery industry. Our members are distribution & transmission organizations as well as equipment and materials manufacturers and suppliers and other service providers.

Our product and our delivery systems together offer an incredibly cost-effective means to help deliver on key objectives such as infrastructure, innovation, environmental performance, energizing the North & remote communities, transportation, emission reductions, and more.

Natural gas has a central place in Canada's energy mix, meeting over 36 per cent of the country's energy needs fulfilling more demand than any other energy form in Canada, more than electricity, more than gasoline, more than diesel fuel or home heating products like propane or fuel oil. Today, at over 6.85 million locations, well over 20 million Canadians rely and benefit from our affordable, clean, safe, and reliable natural gas. As an essential part of our daily lives, natural gas heats our homes, schools, hospitals and businesses, generates electricity, fuels vehicles, and powers appliances.

Introduction

In the Summer of 2017, the Canadian Gas Association & its members undertook a Vision 2050 exercise to develop viable pathways for Canadians to consider in their consultations around what our nation's energy future looks like.

This visioning exercise allowed us to articulate what we believe the natural gas/energy delivery industry and its end-use consumers' needs could look like in 2050 & how our industry can contribute to Canada's goals for emissions reductions, affordable energy, innovation & a dynamic economy.

With the separate launching of the Government of Canada's **Generation Energy** consultation process, NRCan & CGA were able to partner in a workshop in late July 2017 "to look broadly, comprehensively and strategically at how we make, move and use energy". The workshop focused on what Canada's energy future could look like in the long-term; the values & generational goals we should strive to achieve & the pathways and guide-posts we should expect along the way.

The insights gained from the **Generation Energy** exercise were helpful in CGA member efforts to develop this document.

Vision 2050

CGA's Vision 2050 focuses in on three key questions:

1. **What will a Canadian energy consumer look like in 2050?** What energy mix and technologies could provide the necessary energy needs for consumers from industry to homeowners and businesses to the transportation and power generation system?
2. **What will the energy delivery industry itself look like in 2050?** What will the ‘mix’ of energy look like in 2050, including how much of the energy in our pipelines will be natural gas, renewable natural gas (RNG), hydrogen, solar fuels/synthetic natural gas, or some other product, and what other technologies will be required to reduce the system’s & emissions profile & increase its efficiency?
3. **Are there key principles that should help guide all stakeholders?** What are the high-level principles that should be in place to help guide the natural gas industry, governments and stakeholders when considering Canada’s energy future?

In discussing Canada’s energy future, many potential scenarios arise about both what society in general will look like as well as what the energy industry could evolve into.

A recent Environics poll indicated that between 2017 & 2050 Canada’s population growth rate will steadily decline, with more seniors than children, causing a shift away from single detached dwellings to a higher growth rate for high-rise apartments with more one & two-person households. People will use the internet of things to manage most aspects of their lives from energy usage, to ordering groceries, to where & how they will work.

Canadians in 2050 will also be “totally connected” with more choices & options available to them around many aspects of their lives.

With these background thoughts our industry has attempted to understand what the world may look like in 2050 in the context of the questions above.

What will the energy consumer of the future look like?

- “Totally connected” to the world around them, so readily able to access information on questions affecting their day to day well-being
- From that “total connectedness,” able to have a heightened awareness of the impacts of their day to day activities on the world around them – so more accessible by stakeholders like energy service providers
- Less in need of travel to connect for business, and possibly for other services, as more and more such things can come to the home
- Even more accustomed than today to instant access, and therefore even less tolerant of any interruptions of services
- Dependent on energy for more services, but probably requiring much less energy for any one service due to efficiencies

- Quite possibly even less well informed about where energy comes from as the quality & complexity of life increases in concert with people being further and further removed from the diversity of energy supply fueling that life.
- Probably living in an even more urbanized society than today
- Probably living in a society where energy should be even more affordable than today (given that energy has consistently become more affordable over time)
- Probably otherwise just like the consumer of today: trying to support him/herself and a family, trying to make ends meet, trying to get more for less.

What will the energy delivery industry itself look like?

- More integrated, total energy service providers; natural gas, electricity, transportation, etc., but not necessarily conventional utilities – they could be telecom, internet, automotive, energy producing, or other entities
- More choices for independent energy supply needs, with the development of more self-generation technology – meaning some changes in the regulated model
- More consolidation of existing players as rationalization and efficiencies occur amongst conventional players
- More entities playing in a range of markets – domestic and international - with a strong possibility of a significant presence by Canadian entities at the global level given their established bases (not unlike banking)

What are the key principles that could help guide all stakeholders?

- **An open thought process**
There can be no preconceived ideas when considering the optimal solutions for meeting energy needs in the context of economic and environmental and other priorities.
- **Government/industry cooperation**
An open policy and regulatory process that sets conditions rather than trying to set outcomes, allowing creativity in markets to flourish.
- **Prioritized, incremental investment in a diverse, enabling energy future**
Significant, ongoing investment will be required to ensure a constant emphasis on innovation to drive efficiency and excellence.
- **Clear understanding**
Society must have a clear understanding of the life cycle value of any energy decisions & their true implications including the full price of all environmental policies and the impacts on the capacity and resilience of existing energy networks. For energy to remain reliable and affordable we must continue to leverage existing infrastructure and, using a combination of policy, regulations and market forces, innovate in the areas that can most effectively help improve our economic and environmental performance.

Summary

In short, the future means people will have the same human needs they have today, but will want them addressed sooner, more cost effectively and more reliably – and industry will need to respond to those needs, and government will need to keep in place the conditions to allow industry to respond.

We in the gas industry believe we will be a part of that future and are staying as nimble as possible to assure that.

The industry must aggressively pursue new alliances, non-traditional business models & forward-thinking strategies while always remaining focused on the superior value it delivers to Canada's economic prosperity & overall quality of life.

The industry will have to expand its scope & service offerings, drive innovation & technological change & continually strive to be the most efficient full-services organizations possible.

The Canadian natural gas delivery industry fully understands its essential role in the energy future of the country & stands ready to work with all stakeholders in building the necessary methodologies to help achieve Canada's goals of better environmental performance, affordable energy & economic prosperity & innovation.