Future of Natural Gas Expansion and Home Heating Affordability - Discussion Paper for Consultation

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Introduction

Over the past five years, our government has been hard at work making life more affordable for Ontarians and ensuring Ontario is the best place to create jobs and build the industries of the future. A critical part of making Ontario attractive and competitive is ensuring that homes and businesses across our province have access to reliable and affordable energy.

Despite this, thousands of households, businesses and Indigenous communities in rural and northern Ontario pay some of the highest energy bills in the province. The Ministry

of Energy often hears from these communities requesting the same access to affordable home heating options that southern and urban Ontarians have.

Natural gas remains a cost effective and reliable form of home heating compared to other existing heating systems and can also lower emissions when used to replace more carbon intensive heating fuels like propane or heating oil. That's why in 2019 our government launched the Natural Gas Expansion Program (NGEP) to support communities with high home energy bills and a lack of existing natural gas infrastructure. Through Phases 1 and 2 of the program, families and businesses across 59 rural, Northern and Indigenous communities will have the choice to switch from costly, higher carbon fuels to natural gas as the expansion projects are being built.

Purpose of this engagement

Due to the overwhelming interest and demand for the first two phases of this program from communities, businesses and municipal councils, our government has committed to public engagement on a potential Phase 3 of the NGEP as part of Budget 2022, to help families and business save on their energy bills.

This engagement will gather information and feedback about home heating costs and different options for customers in rural, northern, and Indigenous communities who currently do not have access to natural gas infrastructure.

Our government is committed to providing the energy that Ontarians want and need. As part of this commitment, the Ministry of Energy is seeking to update its evaluation of the merits of natural gas, and weigh natural gas expansion against alternative technologies, such as electric heat pumps. We are seeking to determine the best option or options going forward that will ensure safe, reliable and affordable heating options to underserved communities in rural and Northern Ontario, including Indigenous communities.

Background on NGEP

Expanding natural gas can make life more affordable for families and businesses. It could also make local communities more attractive to job creation and investment.

In 2015, Ontario launched its first program to help expand natural gas into communities that were underserved, through the Natural Gas Access Loan and the Natural Gas Economic Development Grant. In 2019, our government launched the most recent program, Phase 2 of NGEP, because we recognized many rural, northern and

Indigenous communities would never be able to afford the up-front costs to extend the critical infrastructure to their communities on their own.

NGEP enables funds to allow natural gas distribution system expansion where it would not otherwise occur without government support. For these projects, the cost of building the infrastructure exceeds the projected revenue that will be generated from customers using that infrastructure.

According to s. 36.2 of the *Ontario Energy Board Act, 1998*, a utility cannot use ratepayer funds to subsidize the cost of building infrastructure unless that infrastructure is expected to generate sufficient revenue to cover its own cost. Customers wanting a gas connection where costs are higher than expected revenues, which may be the case in rural, northern and Indigenous communities, are required to pay an upfront capital contribution out-of-pocket (known as a “Contribution in Aid of Construction” or “CIAC”), which is often prohibitively expensive.

This policy protects existing ratepayers from costs caused by overbuilding the system with underutilized assets. However, it also means that many rural, northern and Indigenous communities are locked into more expensive or more carbon intensive heating sources than southern and urban communities. As a result, government has taken steps to ensure a source of funding is available to support underserved communities who wish to have the same access to low-cost heating options as southern and urban Ontarians.

NGEP fills this funding gap by providing either all, or a substantial portion of the CIAC needed to make a project economic. This funding comes from a $1/month charge on natural gas bills of existing customers, which was authorized by the Legislature through amendments to the *Ontario Energy Board Act, 1998* and the associated O. Reg. 24/19.

Success of NGEP to date

Natural gas is used as a heating source by a majority of Ontarians and is more affordable than other sources such as electric baseboard heat, wood, oil or propane; yet thousands of Ontario households in rural, northern and indigenous communities pay higher heating costs due to their lack of access to natural gas.

Through Phases 1 and 2 of Ontario’s NGEP, more than 17,000 families and businesses from 59 communities will be given the choice to switch to natural gas.

For those who opted in, the switch has been a game-changer.

Access to natural gas has enabled local businesses to reduce operating costs, improve competitiveness and attract more investment to their region - with businesses seeing

savings of up to 30 per cent in energy costs per year. For families this switch has even been more impactful, with households seeing savings of up to 55 per cent on annual energy costs (not including home heating system conversion costs).

Beyond savings, this option has also enabled homes and businesses to switch off more carbon-intensive heating sources and help reduce emissions.

At the time of project submissions in 2020, the natural gas expansions approved in Phase 2 of the program were forecast to result in a net annual decrease in greenhouse gas emissions by 1,146 tonnes of CO2e in year ten after the switch to natural gas[1], as the majority of homes expected to participate were previously heated by propane or home heating oil. From an upfront cost stance, switching from central-heating propane systems to central-heating natural gas is the most straight-forward and often most cost effective compared to homes that are currently heated by home heating oil boilers or electric resistant heating.

Progress with ongoing phases

NGEP continues to help communities build out gas distribution infrastructure to meet local needs, including affordable home heating and development of local businesses. Two phases of NGEP have been launched:

- Phase 1: 8 projects spanning 16 communities; $54.91M in funding; 6 of the 8 projects are under construction and/or complete.
- Phase 2: 28 projects spanning 43 communities; $226.54M in funding. As of July 2023, 5 projects have been completed. The rest are in different stages of regulatory approvals, consultation, and design and planning process.

Phase 2 launched on December 12, 2019, when the Ministry sent a letter to the OEB pursuant to Section 35 of *the Ontario Energy Board Act, 1998* that directed the OEB to report back on potential expansion projects after running a process to collect information and assess submission viability. The letter outlined rules and project information to be collected from the proponents, including projects proposed for an area covered by a franchise agreement being submitted by the franchisee.

Upon receiving the report by OEB, which listed the proposed viable projects and outlined the information collected on each, the Ministry instituted a project selection methodology that emphasized efficient use of funds and broad distribution across the province. This included:

[1] Source: “Report to the Minister: Potential Projects to Expand Access to Natural Gas Distribution”, (OEB, 2020) (available here)

- Ensuring regional diversity within the portfolio by comparing proposals within the same region, and prioritizing selection of the most financially viable project(s) from each region or upper-tier or single-tier municipality.
- In addition to focusing on reducing residential heating costs, directing funding to support projects for on-reserve communities as well as “economic development” projects to drive growth and attract more jobs and investments

The economic development projects supported by NGEP funding in Phases 1 and 2 will continue to support direct and indirect job creation. Natural gas expansion projects can also contribute to the broader stimulation of local economies and main street economic development across Ontario, by creating opportunities and lowering costs for businesses across many sectors, such as farming, agri-food, construction and manufacturing.

State of home heating in Ontario

The most affordable fuel type may differ based on the unique circumstances of a building, community and region. Most recent data available from the Ontario’s Independent Electricity System Operator (IESO) as well as Natural Resources Canada indicate a diverse mix of heating systems and fuels for residential customers in Ontario, with natural gas being the most common fuel.

Fuel	Share (%)
Natural Gas	81.1
Electricity	10.6
Bottled Gas (incl. propane, butane, liquid petroleum)	2.6
Heating Oil	2.5
Wood	2.4
Other/none	0.6

Figure 2: Fuel Type for Single Family Homes in Ontario (IESO Residential End-Use Survey, 2018)

Equipment	Share (%)
Gas Central Furnace	73.4
Gas Boiler	4.8
Gas Wall/Floor Heater	2.7
Gas Fireplace	0.8
Elec. Central Furnace	4.9
Central Heat Pump	2.2
Ductless Heat Pump	0.1
Elec. Baseboard	3.2
Wood Fireplace	2.4
Other	5.4

Figure 1: Heating Equipment for Single Family Homes in Ontario (IESO Residential End-Use Survey, 2018)

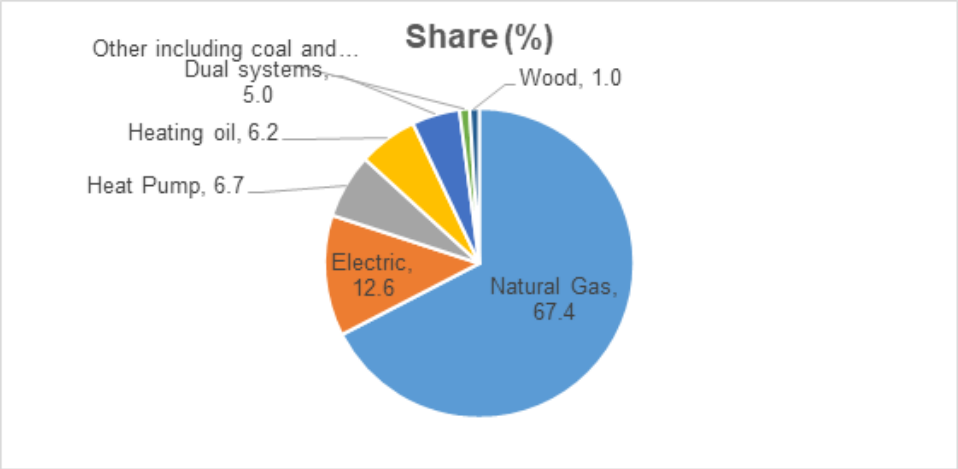


Figure 3: Residential Heating System Types, All Building Types (Natural Resources Canada, 2019)

According to the Financial Accountability Office of Ontario, in 2019 the average Ontario household spent $2,128 on home energy to heat and cool their homes and power their appliances.

Average home energy spending varies significantly by income level. In 2019, households in the highest income quintile (those earning more than $151,063) spent an average of $3,070 on home energy, while households in the lowest income quintile (those earning less than $36,070) spent an average of $1,050.

Although lower income households spend less overall on home energy compared to higher income households, they spend a higher percentage of their income on home energy. In 2019, households in the lowest income quintile spent on average 4.6 per cent of their before-tax income on home energy, while households in the highest income quintile spent 1.2 per cent.

Home energy spending in Ontario also varies by region, reflecting differences in household income, the sources of energy used for home heating and the cost of distributing energy to the region. In 2019, households in the Eastern ($2,338), Northern ($2,245), and Western ($2,192) regions of Ontario had the highest home energy spending, while households in the Greater Toronto Area ($2,010) and Hamilton-Niagara ($2,118) regions spent the least on home energy.

Households in rural areas of Ontario had higher home energy costs due to limited access to natural gas, which is the most cost-effective energy source for home heating, and the high cost of distributing electricity and fuels to rural areas. The FAO estimates that households in rural areas of Ontario (with populations of 1,000 or lower) spent an average

of $3,198 on home energy in 2019, 37 per cent more than an average of $2,002 spent by households in large urban centres (with populations of 250,000 or more).

The government is very mindful of such disparities that could disproportionately affect lower income families in rural and Northern Ontario and in Indigenous communities. That's why we prioritized regional diversity in project selection of NGEP Phase 2 to ensure communities from all across our rural and northern regions get an opportunity to have access to natural gas and reduce their energy bills.

Alternative heating methods

Most homes in Ontario are heated by natural gas, through a natural gas furnace or boiler. Households that do not have access to natural gas are typically heated by electricity (e.g., electric resistance heating), propane, heating oil, or wood.

For households that would prefer an alternative to these typical heating methods, an increasingly popular option for space and water heating is electric-driven heat pumps. Ontario benefits from a clean, reliable and affordable electricity grid, and heat pumps are a viable option to reduce home heating costs while also reducing greenhouse gas emissions.

Heat pumps are a proven technology that have been used for decades, both in Canada and globally, to efficiently provide heating, cooling, and water heating for buildings. In fact, it is likely that you interact with heat pump technology on a daily basis: refrigerators and air conditioners operate using the same principles and technology.[2]

Generally, heat pumps are classified as either air-source heat pumps (ASHPs) or ground-source heat pumps (GSHP, also known as geothermal heat pumps). Both ASHPs and GSHPs can help to meet residential space and water heating needs. In regions with lower average temperatures, improved versions of ASHPs, known as cold-climate air-source heat pumps (ccASHPs), can help meet a larger portion of overall residential space-heating needs compared to conventional ASHPs.

The price of heating equipment may fluctuate depending on several factors, including the size of the home, area climate, energy efficiency rating, and labour costs varying with the general condition of the house, quality of insulation, ceiling height, and others.

Ontario consumers currently have access to provincial and federal support for space and water heating systems, including heat pumps, as well as other home retrofits (e.g. insulation, air sealing, and high-performance windows and doors) through provincially-

[2] Heating and Cooling with a Heat Pump, Natural Resources Canada (available here).

enabled natural gas conservation programs (Demand-Side Management (DSM) programs) delivered by Enbridge.

- The federal government through Natural Resources Canada (NRCan) also offers funding through the Canada Greener Homes Grant,[3] which is integrated into Enbridge's Home Efficiency Rebate Plus (HER+)[4] natural gas conservation program.
- The HER+ program includes rebates for both Enbridge and non-Enbridge customers. Enbridge customers can get up to $10,000 in rebates (plus $600 to offset the cost of the EnerGuide home evaluation – a program requirement), while non-Enbridge customers can get up to $5,000 (plus $600 to offset the cost of the EnerGuide home evaluation). These non-Enbridge customer rebates can include up to $5,000 for a ccASHP or a ground-source heat pump, and $1,000 for a heat pump water heater.

Additionally, low-income households heating their home using oil may be eligible for an additional $5,000 rebate (i.e., a total rebate of $10,000) for replacing their oil-based heating system to ccASHP under NRCan's Oil to Heat Pump Affordability Grant. Up to $40,000 interest-free loans are also available for eligible home energy retrofits (including heat pumps) under the Canada Greener Homes Loan program for qualified homeowners.

Natural gas furnaces, boilers, and water heaters are already subject to high efficiency standards that replacement equipment must meet. HER+ therefore does not provide incentives for such equipment.

Ontario's Clean Home Heating Initiative (CHHI)

The Ontario government is also exploring how natural gas and electricity systems can be leveraged to further save homeowners money and reduce emissions when it comes to heating their homes.

In September 2022, the province launched the Clean Home Heating Initiative (CHHI) with funding of up to $4.5 million to bring hybrid heating to as many as 1,000 homeowners in St. Catharines, London, Peterborough, and Sault Ste. Marie. The initiative provides homeowners with incentives of up to $4,500 to install electric air-source heat pumps with smart controls. Funding was increased to $8.2 million in May

[3] Canada Greener Homes Grant available here.
[4] HER+ available here.

2023 and the program expanded to Barrie, Pickering, Ajax, and Whitby, bringing the total number of eligible Ontario households to more than 1,500.

With about 75 per cent of Ontario homes currently heated with natural gas, hybrid heat pumps provide the energy efficiency benefits of an electric air-source heat pump with the reliable heat of an existing natural gas furnace to help support the transition to clean energy.

A hybrid heating system also mitigates increases in electricity peak demand on the coldest days compared to an all-electric heating system and is estimated to reduce greenhouse gas (GHG) emissions by up to 2.1 tonnes of carbon dioxide equivalents each year per household.

Any individual household's annual heating bill depends on a number of factors, including size of dwelling, weather conditions, type and condition of building and heating equipment, personal preferences for indoor temperature, and other factors. Nevertheless, switching to natural gas as a heating source could potentially save households money on their annual heating bill, compared to other heating sources.

While natural gas is often more affordable than alternative heating sources, there are several factors that need to be considered by customers in potential NGEP communities. These include:

- An additional system expansion surcharge (SES) for customers connecting in expansion communities.[5]
    - The SES is an OEB-approved charge that applies to customers in NGEP expansion communities. The SES is used to allocate the costs of connecting NGEP customers to the distribution system over time (as opposed to requiring an up-front customer payment). The SES applies for a maximum of 40 years. An SES of $0.23 per cubic metre ($m^3$) of natural gas applies in addition to regular rates.
- Potential heating system conversion costs, assuming that the household is not yet outfitted with a natural gas furnace, boiler, or heating elements.
- The federal carbon charge, which applies to natural gas but not to electricity, and is increasing each year until 2030.[6]
- Potential savings from other options such as electric heat pumps.[7]

[5] Natural Gas Expansion Surcharge available here.
[6] Finance Canada – Fuel Charge Rates for Listed Provinces and Territories for 2023 to 2030 available here. As of April 1, 2023, this charge is $0.1239 per m^3, increasing to $0.324 per m^3 by April 1, 2030.
[7] "…*the latest NRCan's "Cost effectiveness of Cold-Climate Air Source Heat Pumps in Canadian Homes…*" available here**.**

Illustrative Range of Costs – Natural Gas and Electricity in 2023 & 2030

In order to compare the potential cost impacts of choosing natural gas versus electricity in a natural gas expansion community in 2030, the following section provides an illustrative range for annual heating bills for a typical residential customer heating primarily by natural gas or electricity.[8]

Natural Gas

The 2023 estimate is based on OEB-approved rates for July 2023 for customers in the Enbridge rate zone, including SES and HST.

In 2030, the lower range of the illustrated cost for a customer using natural gas keeps natural gas supply and delivery costs[9] constant between 2023 and 2030 but reflects increasing federal carbon charges, the SES[10] for expansion customers and HST.

In 2030, the higher range of illustrated cost for a customer using natural gas accelerates natural gas supply and delivery costs by 30% in 2030 (about 3.8% per year) as well as reflecting increased federal carbon charges, the SES for expansion customers and HST.

The range of illustrated natural gas costs is intended to demonstrate that natural gas prices can be volatile due to market-based factors that could significantly increase or decrease costs over time.

Electricity

In 2023, the lower range of illustrated cost for a customer using electricity illustrates a potential expansion community customer[11] with heating provided entirely by an electric

[8] A typical natural gas residential customer is assumed to consume 2,400 m^3 of natural gas annually. For this illustrative range, to compare natural gas and electricity consumption costs, an energy equivalent of consuming 2,400 m^3 of natural gas annually was used (equivalent to 89.5 GJ). Conversion factors used are available here.

[9] Costs based on OEB's Decision and Rate Order for Enbridge rates effective July 1, 2023 and includes HST. For 2030, the applicable federal carbon charge for 2030 is applied.

[10] The system expansion charge (SES) is fixed at $0.23 per m^3 and does not change.

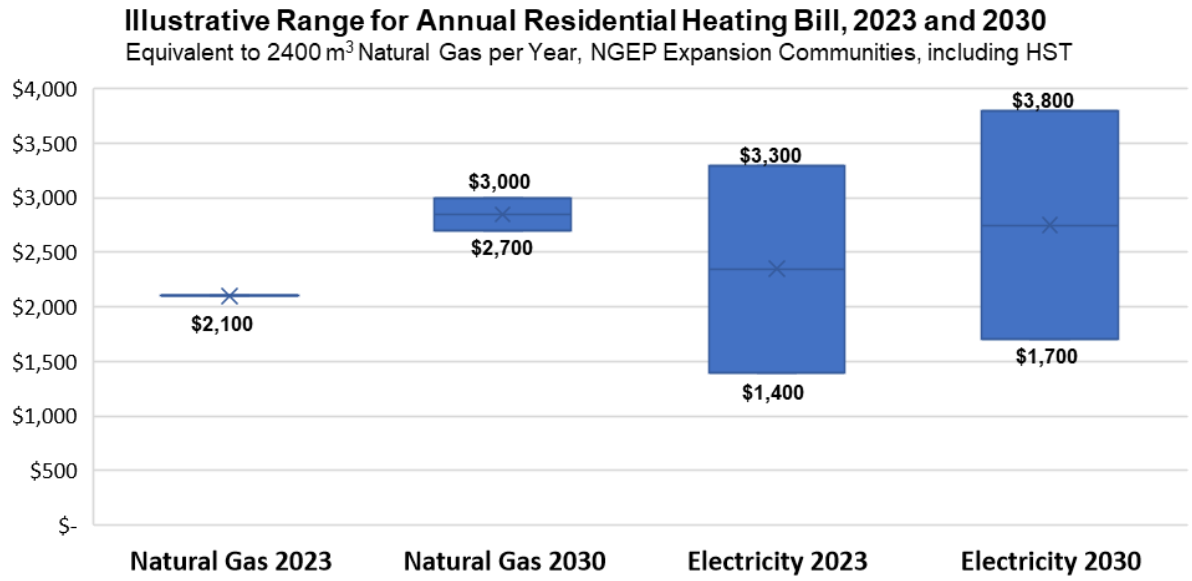
[11] Assumed to be a Hydro One R1 medium density customer. Annual bill is calculated using 89.5 GJ heating load, or 24,860 kWh. All heating is assumed to occur during winter rate period (Nov.1st to Apr. 30th) using tiered rates, based on current R1 tariff available here, exclusive of all fixed charges but includes volumetric charges for incremental heating load, such as rate riders, regulatory and retail transmission rates, commodity cost, R1 rate class distribution losses of 7.6%, and the 11.7% Ontario Electricity Rebate (OER) and HST.

cold climate air source heat pump operating at a peak-rated performance of 200%[12] efficiency (i.e., consuming about 40.5 GJ or 11,360 kWh). The electricity cost excludes all fixed charges but includes HST.

In 2023, the higher range of illustrated cost for a customer using electricity illustrates a potential expansion community customer using an electric heat source with 100% efficiency (i.e., 89.5 GJ of heating or about 24,860 kWh, as would occur with electric baseboard heat).

In 2030, the electricity costs are assumed to increase by 2% per year (i.e., 15% by 2030) for the cold climate air source heat pump and electric baseboard heat scenarios.

The range of illustrated electricity costs is intended to demonstrate the range of efficiency factors faced by a customer using an electric heat source (e.g., standard electric resistance heating through to a cold climate air source heat pump) where performance can vary depending on temperature, equipment choice and individual household characteristics. The range of costs is not intended to provide a forecast of future electricity prices.



Notes: The illustrative range of natural gas costs is not a forecast of future natural gas prices. Commodity prices for natural gas are set in a competitive North American market based on supply and demand conditions and will be subject to significant uncertainty and volatility over time. The illustrative range of electricity costs is not a forecast of future electricity prices or operating performance of specific electric heating technology. The trajectory of electricity prices will depend on Ontario government policy decisions as well as costs related to procuring new electricity resources to meet system needs by 2030.

[12] Heat pumps are estimated to reduce energy demand by about 49 GJ or 13,500 kWh.

Environmental considerations

Ontario's Made-in-Ontario Environment Plan indicates the province's 2030 target of reducing greenhouse gas emissions (GHGs) by 30% below 2005 levels. As buildings in 2021 represented 25% of Ontario's emissions, emission reductions from space and water heating and cooling are critical to achieving the province's emission reduction targets.

Today, Ontario already benefits from one of the cleanest electricity systems in the world, with about 90% of the electricity generated from emissions-free sources in 2022, making Ontario electricity a very clean energy source. The use of electric resistance heating (e.g., baseboards), has historically been more costly for households than natural gas options; however, newer, more efficient technologies may close this gap. Decarbonization targets at local, national and international levels, are also increasingly being factored into household and community investment decisions.

Although natural gas is primarily made up of methane, which is a greenhouse gas, it burns cleaner and therefore leaves a reduced carbon footprint compared to burning coal and other fossil fuels to produce an equal amount of energy. The NGEP could give people and businesses the choice to switch from more carbon-intensive and costlier energy sources. This is both better for the environment and for Ontarians' pocketbooks.

Switching from home heating oil or propane to natural gas would lower a household's greenhouse gas (GHG) emissions. While it is expected that some NGEP participants would switch from electricity to natural gas, we estimate that overall, the program will result in lower emissions. The total forecasted GHG impact in year 10 of full connections (2035 at earliest) is a reduction of 1,146 tonnes of CO_2 equivalents (t CO_2e)[13]. According to Natural Resources Canada Greenhouse Gas Equivalencies Calculator, this is comparable to the emissions produced by 350 passenger vehicles.

Environmental considerations should also take into account that consumers who switch to natural gas may also have future options to decarbonize their energy mix through renewable natural gas (RNG) and low-carbon hydrogen injected directly into the natural gas pipeline system. Customers today can access RNG through a retail contract or a voluntary program from Enbridge. Although current production levels are small, natural gas distributors across North America are looking at increasing RNG supplies. For example, British Columbia has a target of 15 per cent of the provincial gas supply being

[13] Source: "Report to the Minister: Potential Projects to Expand Access to Natural Gas Distribution", (OEB, 2020) (available here)

renewable or low carbon by 2030, while Quebec has set a 10 per cent RNG target by 2030.

Similarly, low-carbon hydrogen is being blended into the natural gas distribution network in a pilot project in Markham, Ontario. The RNG and low-carbon hydrogen decarbonization options would utilize the existing natural gas transmission and distribution networks (or new distribution infrastructure for natural gas expansion communities) and thereby avoid the capital cost associated with widespread electrification. As such, in the long-term, these decarbonization alternatives may prove to be cost competitive.

Home heating and Indigenous Communities

Indigenous households may face different and cumulative challenges related to heating. In addition to energy costs which can add to the economic barriers Indigenous communities and individuals face in Ontario, Indigenous residents on-reserve experience challenges that impact their ability to have well-heated homes regardless of fuel source. Many homes on-reserve are poorly insulated and ventilated, which increases the likelihood of heat escaping. There are often needs for weatherization and deeper retrofits in order to achieve comfortable and healthy homes on reserve.

Provincially-enabled energy efficiency programs have traditionally targeted low-income and indigenous communities often offering free home weatherization, retrofits and appliances to increase the energy efficiency of the home, and in turn reduce energy bills. While these programs can significantly reduce costs, access to lower-cost energy can often have an even greater impact.

Related activities

Unlike previous governments, which viewed the energy system in isolation (refined petroleum products, natural gas, and electricity), the Ontario government is leading Canada in implementing an integrated energy planning process to ensure it is making the most cost-effective decisions necessary to prepare for a clean energy future.

Building the clean energy infrastructure necessary to power Ontario’s future will be a complex undertaking that will require the highest level of strategic energy planning and coordination.

For these reasons, in April 2022, the Minister of Energy announced the creation of the Electrification and Energy Transition Panel to help the government prepare Ontario’s economy for electrification and the energy transition and take the necessary steps now

to ensure we have the energy infrastructure to support the growing demand for clean energy. While long-term electricity planning is important, fuel-switching will also play a key role in Ontario's evolving clean energy mix. Understanding where and when this will occur will be crucial during the energy transition. Through integrated energy planning, Ontario will be empowered to make smart decisions that will further support lowering energy bills and create a more predictable and competitive investment environment.

The Panel will identify strategic opportunities and recommend necessary planning reforms to support emerging electricity and fuels planning needs in the context of the broader transition to a clean energy economy.

To support the work of the Panel and provide key inputs into long-term energy planning, the provincial government has commissioned an independent Cost-effective Energy Pathways Study to understand how Ontario's energy sector can support electrification and the energy transition in a cost-effective way.

Feedback collection

Stakeholders and Indigenous communities and organizations are invited to respond to any number of the discussion themes and questions identified above. We are seeking input to enable diverse voices with different perspectives to be heard while the government makes future decisions on natural gas expansion. The themes listed above may be of interest to the following stakeholders and Indigenous communities:

- Members of the public and energy consumers who have recently switched to natural gas or other fuels and systems for home heating, and those who are interested in switching in near future
- Municipal government representatives in rural and northern regions, including those in the areas without natural gas infrastructure
- Natural gas distribution companies
- Non-governmental organizations
- Affordability advocacy groups
- Contractors working in the home heating field
- All other groups with relevant experience or information

Decisions around a potential future phase of NGEP will be informed by the information collected through stakeholder and Indigenous community responses to this discussion paper, as well as broader ongoing work on integrated energy planning, including the Electrification and Energy Transition Panel and the Cost-Effective Energy Pathways Study commissioned by the Ministry. All NGEP funds have been allocated to Phase 1 and Phase 2 expansion projects until 2026. Beyond this timeline and the projects

prescribed in regulation through Phases 1 and 2, no decisions have been made in terms of funding source, collection mechanism, or types of projects that could be supported.

The decisions around energy infrastructure investments are complex and with long-term implications. The government will continue to respect value for money for the natural gas ratepayers, while ensuring that these investments are made in way that balances the affordability concerns and electrification goals for families and businesses. To that end, the government will prudently study the stakeholder input provided to this consultation paper and determine the best options for the future of NGEP.

As well as this consultation, the government is also considering the future of electricity energy efficiency programming in the province through ERO #019-7401. One consideration around the next evolution of energy efficiency programming is beneficial electrification which could include incentives to increase electricity use at times of the day or year when the province produces more than it consumes, such as overnight or cooler months. A technology which could help meets these requirements is electric heat pumps.

Discussion themes

The Ministry is seeking feedback on the following themes:

Theme #1: Performance of NGEP to Date

We want your input, including:

- What are your perspectives on the operations of NGEP to date, including the application and project intake process for Phase 2 NGEP in 2020?
- What, in your opinion, are the most important aspect(s) and successes of natural gas expansion as supported through this program?

When evaluating successes, consider realized and expected benefits, as many of Phase 2 expansion projects are still under construction or in the development phase.

Theme #2: Conversion to Natural Gas for Home Heating

We want your input, including:

- Do you have any relevant information related to your experience with the cost of residential heating system conversion to natural gas from other fuel types (such as propane, fuel-oil, wood, and electric baseboard heating)? If available, please include a breakdown or estimate of all one-time costs incurred in this process (e.g., equipment cost for natural gas furnace, costs of retrofitting a home, upfront cost of connecting a home to the nearby main natural gas line).
- We are looking to gather information from customers who have converted their homes to natural gas heating in the recent years. For example:
    - Do you have information on the ease of finding qualified and experienced technicians/contractors to complete the work, timeliness of upgrades and/or connections?
    - What is your awareness about available government/industry subsidies and the ease of accessing incentives when converting a home to natural gas heating from other fuel types?
- Do you have any information on monthly or annual energy cost differences between natural gas, and the other fuel types/home heating systems? Please note any savings for households from using natural gas, based on your own experiences and/or your estimates and forecasts, if available. Please note your assumptions and all relevant context to the extent possible.

Theme #3: Natural Gas Expansion and Indigenous Communities

In addition to the other themes, Indigenous communities and individuals are invited to provide their input on the following questions:

- Are there any additional or unique concerns and priorities that you or your community experience or have identified regarding heating options, cost, and affordability?
- Are there any specific environmental concerns that you or your community feel should be considered or prioritized in current and future natural gas planning?
- Are there any specific concerns or priorities that you or your community or organization associate with future natural gas planning (e.g., community involvement in the planning of natural gas infrastructure expansion, relevant economic opportunities and partnerships)?

Theme #4: Future of Natural Gas Expansion

We want your input, focusing on the following questions:

- What applications (such as residential, industrial, commercial, or agricultural) should natural gas expansion focus on in the future?
- Where do you think further public investment in natural gas infrastructure makes sense and why?
- Alternatively, what other energy technologies could be considered instead of natural gas expansion?
- What other alternative government initiatives do you think could be in place to support cost-effective home heating in Ontario?
- Do you think the government should have a larger role in identifying potential natural gas expansion projects to receive public funding, based on advice from the OEB and the project proponents?
- How does natural gas expansion fit with provincial, municipal, or community-level sustainability objectives as well as ongoing electrification trends? What are the potential risks and benefits?