**Consultation to support the**

**important role for natural gas in Ontario’s energy system and economy**

We are seeking feedback from the public, stakeholders and Indigenous communities on the questions below to help inform the province’s Natural Gas Policy Statement:

**What principles should the government provide to the OEB to help inform the Board’s ongoing development of natural gas connection policies?**

* + Well, for starters, the government of Ontario should have titled this initiative “Consultation to assess the future role of natural gas in Ontario’s energy system and economy”… So, the first principle is for the government of Ontario to do what is right and work for and support the people of Ontario, not Enbridge.
  + That said, the primary principle for the OEB to follow with respect to the development of natural gas connection policies for Ontarians is that Climate Change must be considered a priority in every decision made. Specifically, that:
    - We are in a Climate Emergency and every country, including Canada, must do their ‘fair share’ to reduce GHG emissions. There is no debate - Climate Change is an existential threat to life on Earth, including our own. If the Ontario’s ministry of Energy does not understand this, then you are unfit to govern – Best not make any changes that will make things worse!
    - The government of Ontario must take serious, science-backed action to address the most important issue modern humans have ever faced - Climate Change. Natural gas use in Ontario must be capped immediately, then reduced over the next several years consistent with the Paris Agreement. To be clear, methane (natural gas), is 80 times more potent than carbon dioxide as a heat retaining greenhouse gas (GHG) over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period, hence is a major contributor to Canada’s climate pollution.
    - We are already seeing the early effects of climate change around the world with more frequent and severe droughts and wildfires, as well as violent storms and floods. These extreme weather events will only get worse, and closer to home, until we drastically reduce our GHG emissions, including emissions from natural gas!
    - Even northerly Canada is feeling the financial pain of Climate Disasters as the summer of 2024 saw unnatural extreme weather events resulting in a record 228 thousand insurance claims - a 406% increase compared to the previous 20-year average. Ontario experienced an unnatural increase of storms last year that included more than an average number of tornadoes along with a ‘once in a hundred years’ flooding - for the 3rd time in the past decade. 2024 insured losses related to these weather events set a record in Canada, reaching close to $8B.
    - Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles happened here in Ontario!
    - Some people like to think that Canada is not the problem, we aren’t to blame for climate change, however that is far from the truth! As one of the world’s major oil producing countries, Canada is a major contributor to Climate Change. Any credible report lists Canada #8 in cumulative global GHG emissions and when we add scope 3 emissions from the approximately 80% of oilsands bitumen that is exported, our resulting emissions put us in the ‘middle of the pack” of the Top 10 countries most responsible for climate change. When considering population size, Canada is one of the top 3 most climate polluting countries in the world on a per person basis. There is no denying that Canada is one of the ‘bad guys’ when it comes to climate change!
    - Canadians should be ashamed that the global Climate Change Performance Index, which compares the climate performance of 63 countries and the EU responsible for 90% of global GHG emissions, ranks Canada #62 - One of the world’s lowest performing countries! Why? Outside the Petrostate of Alberta, Ontario is Canada’s biggest climate polluter, hence decisions must be made to reduce, not increase GHGs from fossil fuels, and that includes natural gas! Ontario must play a key role in turning Canada into a role model for fighting climate change.
    - The government of Ontario must recognize that since 1990, the EU have reduced emissions by >35%, including industrial powerhouse Germany, whose emissions have been reduced by >40%. The UK have reduced their GHG emissions by >50%. The EU is on target to reduce their emissions by 55% this decade, while the UK are heading towards an >80% reduction by 2035. Meanwhile, back at home, while Ontario’s power-related GHG emissions declined between 2011 and 2017 as the province phased out fossil fuel (coal) electricity generation, after the cancellation of >750 planned renewable energy projects in 2018, emissions have been on the rise in Ontario as the province relies more & more on fossil fuel (natural gas) power generation. This trend must be stopped immediately, then reversed ASAP.
    - The government of Ontario must take addressing the biggest issue modern humans have ever faced, with deadly seriousness. Ontario must cap, then drastically reduce emissions from burning natural gas for electricity generation and for heating buildings (space & water) - Period.
    - It is long past time for Ontario’s politicians to acknowledge and confront the continual series of lies coming from the natural gas industry and related media propaganda. It is time for the government of Ontario to do what is right for all Ontarians and life on Earth, not what benefits extremely wealthy Enbridge executives and shareholders!
  + The OEB should look to other countries, ideally the UK, the EU, the US and China, to emulate what they are doing to reduce GHG emissions while increasing their electricity and heat energy supply.
  + Ontarians desperately need the government of Ontario and the OEB to transition to locally generated, non-polluting renewable energy, and energy storage, along with policies and methods to decarbonize buildings (such as with heat pumps).
  + Principles related to GHG emission reductions, and the economics associated with generating electricity via renewables include:
    - Recognize that Renewable Energy is on the rise globally, and Ontario is falling behind – This is a threat to businesses and citizens in the province:
      * China is the global leader in renewable energy with nearly half of the world’s wind and solar capacity and are years ahead of schedule in doubling its utility-scale solar and wind power capacity by 2030.
      * The USA now produces enough solar & wind energy to power >60m homes - 39M from wind (more than double from 10 years ago) + 22M from solar (8 times more than a decade ago). Energy storage capacity has also increased 100 fold in the past decade. Enough energy to power all of Canada!
      * The UK is the world leader in offshore wind energy, powering over 7.5 million homes. Northern Europe has used wind power for decades and the industry now employs over 300,000 people. We can and should do the same.
      * Iceland powers 9 out of 10 homes with geothermal energy
      * Sweden is on track to reach their 2040 goal of 100% fossil-free renewable electricity production, without the use of nuclear energy!
    - Countries generating significant amounts of electricity with wind and solar include: Denmark (67% of their electricity generation mix), Germany (40%), the Netherlands (40%), the U.K. (34%) and 28% in Australia. We can do the same.
    - In the USA, Iowa generates 63% of their electricity with wind and solar, South Dakota 55%, as well as geographically large (and traditional petrostates) California 34%, and Texas 26%. We can do the same.
    - For comparison – The vast majority of Ontario’s current renewable energy comes from hydro (and nuclear) – Less than 13% of Ontario’s total electricity is generated by wind and solar, hence we have a huge opportunity to close the gap with other countries and remain economically competitive!
    - FYI – In December 2024, the government of BC approved nine wind energy projects, providing enough annual energy to power 500,000 homes. Ontario can and should do something similar!
    - When looking at the Levelized Cost of Electricity Generation, Renewables are much cheaper than Natural Gas (and Nuclear)
      * Global LCOE: Onshore Wind = 5₵ kWh; Solar (utility) = 6₵; Gas = 7.5₵; Coal = 12₵; peaker gas = 16.5₵; nuclear = 18₵
      * According to the OCAA: Ontario’s options include: Quebec Hydro = 5.2₵ kWh; Solar + Storage = 10₵; On-shore Wind + Storage = 10.5₵ (= Existing Nuclear); Off-shore Wind = 14.3₵; New Gas Peaker = 22.7₵ and New Nuclear = 24.4₵
      * Note: As per the IESO, storage projects cost $672.32 per MW, while gas-fired generation projects cost $1,681.14 per MW. The choice is clear, and the air will be too if the government of Ontario makes the right decisions!
    - Key benefits of a distributed renewable energy generation network include:
      * Economics: Locally generated, non-polluting solar and wind power, combined with energy storage, is the most cost-effective and quickest way to meet the rising demand for electricity. In fact, building solar or wind facilities combined with Energy Storage systems costs less than half that of constructing new gas ‘peaker’ plants or nuclear reactors. Once built, renewables operate over the long-term at very low cost as the “fuel” is essentially free.
      * Local Economy: Instead of a small percentage of (foreign) shareholders profiting, local renewable energy generation recirculates energy generation profits and cost savings in the Region / Province.
      * Business Investment / Growth: Low carbon energy production attracts companies striving to reduce their GHG emissions. As customers demand more sustainable and eco-friendly products, companies with sustainable business practices (such as a zero-emission power) can attract new customers and enhance brand awareness.
      * Supply Chain Accessibility Opportunities: Major purchasers, including many government buyers and others require their suppliers to consistently increase sustainability and lower their carbon footprint.
      * Job Creation: Healthy businesses result in growth and new hiring. Local renewable energy generation facilities also create temporary and long-term employment.
      * Energy Independence / Cost Stability: Local renewable energy generation provides economic resilience and protects against fluctuations in market driven energy prices - In contrast to fossil fuels, the pricing of local renewables is not based on global commodity trading, subject to large market swings, as a result, renewable energy prices are typically less expensive and more stable over time.
      * Human Health and Well Being: Improved air quality and over-all health.
      * Climate Change Mitigation: A healthier natural environment will help protect us from the inevitable impacts of climate change
  + Principles related to GHG emission reductions, and the economics associated with heating buildings (space & power) with heat pumps include:
    - From 1990 to 2022, Ontario’s largest increase in GHGs has come from buildings, hence the OEB must reevaluate and update the current Enbridge model for new developments. In other words, the government of Ontario must repeal Bill 165 and implement the OEB’s decision from December 21st, 2023. As a reminder, the OEB correctly concluded “The energy transition poses a risk that assets used to serve existing and new Enbridge Gas customers will become stranded. The risk that arises from the energy transition results from gas customers leaving the gas system as they transition to electricity to meet energy needs previously met by natural gas. This departure gives rise to assets that are not fully depreciated but are no longer used and useful. This results in stranded asset costs that Enbridge Gas would seek to recover from the remaining gas customers. This in turn would increase rates for those gas customers, leading more customers to leave the gas system, potentially leading to a continuing financial decline for the utility.” Once fossil gas lines are built-out, consumer choice is effectively lost, and higher emissions & costs are ‘locked in’ for years to come. With business as usual, gas costs will spiral out of control. Bill 165 provides no solutions for the province’s looming energy cost and carbon pollution issues, it simply protects a super-profitable corporation (Enbridge) and its shareholders. As Bill 165 forces the status quo upon us, it removes customer choice and increases costs while continuing to increase the Province’s GHG emissions. What we all need is a path to a cheaper, cleaner energy future, and the OEB has already shown us the way… **The OEB Decision in December 2023 gave consumers a choice, opening the door to less polluting and more affordable options, namely heat pumps (geothermal and/or air-sourced)!**
    - Ontario should follow the lead from: over 50 California municipalities who have banned gas appliances from new buildings; the City of Vancouver who has introduced partial bans on fossil-fuel heating systems for all new and replacement installations starting in 2025; and the province of Quebec who have already introduced partial bans on fossil-fuel heating systems for all new construction… Ontario is falling further and further behind, increasing the cost of living for all Ontarians while making the climate crises worse than it needs to be!
    - Recognize that geo-exchange (ground-source) and air-source heat pumps are the most affordable and least polluting path forward!
      * In 2021, around 190 million heat pumps were in operation globally
      * EU countries with the highest heat pump adoption rates are all cold-weather countries: Norway (60%), Sweden (43%), Finland (41%) and Estonia (34%)
      * In 2022, France had the highest sales numbers for new heat pumps in Europe, with > 600K units sold in a single year.
      * For comparison, just over 800,000 heat pumps have been installed in Canadian homes, addressing just 6% of residential heating. At one end of the heat pump adoption rate spectrum, we have the Maritimes - Thanks to purpose-designed government agencies and incentive programs - New Brunswick leads the way at 32%, followed by PEI at 27% and Nova Scotia at 21% (up from 6% a decade ago). At the other end of the heat pump spectrum, we have Ontario with a relatively low adoption rate of less than 7%. Another huge opportunity for improvement to help all Ontarians!
    - Key benefits associated with heating buildings (space & power) with air-source or ground-source heat pumps include:
      * Economics / Affordability:
        + As per the Canadian Climate Institute: The average Ontario homeowner with a gas furnace and air conditioner would save $10,000 or more over the lifetime of their equipment (18 years) when switching to an air-source heat pump / up to $24K when switching to a ground-source heat pump.
        + As per Corporate Knights: An Ontario household switching to a heat pump would save $489 a year, savings that will nearly double by 2030 as the price on carbon increases. Swapping out gas water heaters & stoves would eliminate the fixed monthly gas charges, resulting in a combined savings of an additional $439 a year.
        + According to Clean Energy Canada: A family that swaps out natural gas-burning appliances and gas-powered cars with more sustainable options would save between $550 and $777 per month, depending on where they live in Canada.
        + Recirculating energy cost savings in the Region
        + Lower Operating Costs: Once the equipment is in place, operating costs are significantly cheaper than natural gas, as the fuel is essentially free.
      * Business Investment / Growth: As customers demand more sustainable and eco-friendly products, companies with sustainable business practices, such as zero-emission buildings, can attract new customers and enhance brand awareness.
      * Supply Chain Accessibility Opportunities: Major purchasers, including many government buyers and others require their suppliers to consistently increase sustainability and lower their carbon footprint.
      * Job Creation / Employee Morale: Healthy businesses result in growth and new hiring. 92% of young workers would prefer to work for an environmentally concerned company. Employees become more committed to their company when the company stands for something meaningful, that they believe in (such as climate change), resulting in improved employee morale and productivity.
      * Improved Air Quality and Over-all Health
      * Climate Change Mitigation: A healthier natural environment will help protect us from the impacts of climate change

**What role should natural gas play in supporting energy affordability and customer choice in residential and small commercial applications (e.g., space and water heating)?**

* As there are alternatives to natural gas that are more affordable and less polluting, the role of natural gas in heating residential and small commercial buildings must be minimized, if not eliminated entirely. Preference should be given to modern, cost effective and non-polluting solutions such as geo-exchange (ground-source) and air-source heat pumps.
  + The government of Ontario must take serious, science-backed action to address the most important issue modern humans have ever faced - Climate Change. Climate Change is an existential threat to life on Earth, including our own. When considering population, Canada is one of the top 3 most climate polluting countries in the world on a per person basis. There is no denying that Canada is one of the ‘bad guys’, and we need Ontario to help the country to clean-up our act ASAP!
  + Natural gas use in Ontario must be capped immediately, then reduced over the next several years to ensure GHG reductions consistent with the Paris Agreement. To be clear, methane (natural gas), is 80 times more potent as a GHG than carbon dioxide over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period, hence is a major contributor to Canada’s climate pollution. We are already seeing the early effects of climate change around the world with more frequent and severe droughts and wildfires, as well as violent storms and flooding. These extreme weather events will only get worse, and closer to home, until we drastically reduce our GHG emissions!
  + Even northerly Canada is feeling the financial pain of Climate Disasters as the summer of 2024 saw unnatural extreme weather events resulting in a record 228 thousand insurance claims - a 406% increase compared to the previous 20-year average. Ontario experienced an unnatural increase of storms last year that included more than an average number of tornadoes along with ‘once in a hundred years’ flooding - for the 3rd time in the past decade. 2024 insured losses related to these weather events set a record in Canada, reaching close to $8B.
  + Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles happened here in Ontario! Ontario must cap, then drastically reduce emissions from burning natural gas for electricity generation and for heating buildings (space & water) - Period.
* From an affordability perspective, there is no future with natural gas – heat pumps are the path towards providing consistent low cost heat for buildings.
  + As per the Canadian Climate Institute: The average Ontario homeowner with a gas furnace and air conditioner would save $10,000 or more over the lifetime of their equipment (18 years) when switching to an air-source heat pump / up to $24K when switching to a ground-source heat pump.
  + As per Corporate Knights: An Ontario household switching to a heat pump would save $489 a year, savings that will nearly double by 2030 as the price on carbon increases. Swapping out gas water heaters & stoves would eliminate the fixed monthly gas charges, resulting in a combined savings of an additional $439 a year.
  + According to Clean Energy Canada: A family that swaps out natural gas-burning appliances and gas-powered cars with more sustainable options would save between $550 and $777 per month, depending on where they live in Canada.
  + The same (as above) applies to commercial space.
* Key benefits associated with heating commercial buildings with heat pumps include:
  + Business Investment / Growth: As customers demand more sustainable and eco-friendly products, companies with sustainable business practices, such as zero-emission buildings, can attract new customers and enhance brand awareness.
  + Supply Chain Accessibility Opportunities: Major purchasers, including many government buyers and others require their suppliers to consistently increase sustainability and lower their carbon footprint.
  + Job Creation / Employee Morale: Healthy businesses result in growth and new hiring. 92% of young workers would prefer to work for an environmentally concerned company. Employees become more committed to their company when the company stands for something meaningful, that they believe in (such as climate change), resulting in improved employee morale and productivity.
  + Improved Air Quality and Over-all Health
  + Climate Change Mitigation: A healthier natural environment will help protect us from the impacts of climate change
* Currently, there is little-to-no choice for purchasers of homes or commercial space. Once fossil gas lines are built-out, consumer choice is effectively lost, and higher emissions & costs are ‘locked in’ for years to come. The OEB’s decision from December 21st, 2023, gave consumers a choice, opening the door to less polluting and more affordable options, namely heat pumps. The government of Ontario must repeal Bill 165 and implement the OEB’s previous decision in order to break the Enbridge monopoly and give customers a choice! As a reminder, the OEB correctly concluded “The energy transition poses a risk that assets used to serve existing and new Enbridge Gas customers will become stranded. The risk that arises from the energy transition results from gas customers leaving the gas system as they transition to electricity to meet energy needs previously met by natural gas. This departure gives rise to assets that are not fully depreciated but are no longer used and useful. This results in stranded asset costs that Enbridge Gas would seek to recover from the remaining gas customers. This in turn would increase rates for those gas customers, leading more customers to leave the gas system, potentially leading to a continuing financial decline for the utility.” With business as usual, gas costs will spiral out of control. Bill 165 provides no solutions for the province’s looming energy cost and carbon pollution issues, it simply protects super-profitable Enbridge, its executives and its shareholders. As Bill 165 forces the status quo upon us, it removes customer choice and increases costs while continuing to increase the Province’s GHG emissions. What we all need is a path to a cheaper, cleaner energy future, and the OEB has already shown us the way…

**What role should natural gas play in supporting economic development in Ontario’s industrial and agricultural sectors, including those processes that may be difficult to electrify?**

* As there are alternatives to natural gas that are more affordable and less polluting, the role of natural gas in Ontario’s industrial and agricultural sectors must be minimized, if not eliminated entirely. Preference should be given to modern, cost effective and non-polluting solutions such as geo exchange (ground source) heat pumps and air-source heat pumps, or electrical arc furnaces etc for industrial heating, and local renewables like solar and wind for energy generation.
* The government of Ontario must take serious, science-backed action to address the most important issue modern humans have ever faced - Climate Change. Climate Change is an existential threat to life on Earth, including our own. When considering population, Canada is one of the top 3 most climate polluting countries in the world on a per person basis. There is no denying that Canada is one of the ‘bad guys’, and we need to clean-up our act ASAP!
* Natural gas use in Ontario must be capped immediately, then reduced over the next several years to ensure GHG reductions consistent with the Paris Agreement. To be clear, methane (natural gas), is 80 times more potent as a GHG than carbon dioxide over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period, hence is a major contributor to Canada’s climate pollution. We are already seeing the early effects of climate change around the world with more frequent and severe droughts and wildfires, as well as violent storms and flooding. These extreme weather events will only get worse, and closer to home, until we drastically reduce our GHG emissions!
* Even northerly Canada is feeling the financial pain of Climate Disasters as the summer of 2024 saw unnatural extreme weather events resulting in a record 228 thousand insurance claims - a 406% increase compared to the previous 20-year average. Ontario experienced an unnatural increase of storms last year that included more than an average number of tornadoes along with a ‘once in a hundred years’ flood - for the 3rd time in the past decade. 2024 insured losses related to these weather events set a record in Canada, reaching close to $8B.
* Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles happened here in Ontario!
* The advantages for industrial/agricultural sectors moving away from natural gas include:
  + Business Investment / Growth: As customers demand more sustainable and eco-friendly products, companies with sustainable business practices, such as zero-emission buildings and electricity supply, can attract new customers and maintain/enhance brand awareness.
  + Supply Chain Accessibility Opportunities: Major purchasers, including many government buyers and others require their suppliers to consistently increase sustainability and lower their carbon footprint - Companies with sustainable business practices, such as zero-emission buildings and electricity supply, can attract new customers / business.
  + Job Creation / Employee Morale: Healthy businesses result in growth and new hiring. 92% of young workers would prefer to work for an environmentally concerned company. Employees become more committed to their company when the company stands for something meaningful, that they believe in (such as climate change), resulting in improved employee morale and productivity.
* As more and more people inevitably join the green energy transition and abandon fossil gas in favour of cheaper and cleaner heat pump technologies, the price of gas for remaining gas customers will rise and rise as fewer people are forced to pay for the ongoing depreciation of the gas network. We do not want any of these stranded customers to include Ontario’s manufacturers, farmers or greenhouse owners as it would increase the cost of production, including food. Most importantly, it is in everybody’s best interest for Ontario greenhouse owners to transition to alternative energy solutions ASAP. Without fossil gas subsidies, the most economical way to heat greenhouses is with (passive and/or PV) solar and/or heat pumps. Solutions also exist to ensure greenhouses obtain the CO2 they need as plant food. These businesses must manage their transition before the inescapable rising costs of gas makes life difficult for everyone. As you probably (or should) know, geo-exchange ground-source heat pumps are being used successfully all over the world, including in Ontario. Greenhouses, with heating (and cooling) provided by solar (passive and/or PV) as well as ground source heat pumps exist across the globe – Ontario can learn from Türkiye, a world leader. As per the Grain Farmers of Ontario, soon, even drying grain will be done with heat pumps. The days of natural gas use on successful greenhouses are numbered…

**What role should the government play in supporting and expediting the rational expansion of the natural gas system to make home heating more affordable and support economic growth in communities that are seeking natural gas service?**

* The primary role of any government is to keep its citizens safe and to take steps to ensure people’s well-being. This means protecting us from deadly events caused by Climate Change by ensuring Ontarians have access to have clean energy and an unpolluted environment. This cannot be achieved with fossil fuels. Affordability and economic growth come from freedom from monthly fossil fuel bills – Renewable energy powering the electrification of everything (heat pumps, EVs, etc…) is the only viable path forward.
* The government of Ontario can ensure home heating is more affordable by NOT expanding the natural gas system, instead developing policies to encourage the use of energy efficient, cost effective, non-polluting heat pumps. The government of Ontario needs to get out of the way and let the OEB do their job. In other words, the government of Ontario should repeal Bill 165 and implement the OEB’s decision from December 21st, 2023. As a reminder, the OEB correctly concluded “The energy transition poses a risk that assets used to serve existing and new Enbridge Gas customers will become stranded. The risk that arises from the energy transition results from gas customers leaving the gas system as they transition to electricity to meet energy needs previously met by natural gas. This departure gives rise to assets that are not fully depreciated but are no longer used and useful. This results in stranded asset costs that Enbridge Gas would seek to recover from the remaining gas customers. This in turn would increase rates for those gas customers, leading more customers to leave the gas system, potentially leading to a continuing financial decline for the utility.” With business as usual, gas costs will spiral out of control. Bill 165 provides no solutions for the province’s looming energy cost and carbon pollution issues, it simply protects a super-profitable corporation and its shareholders. What we all need is a path to a cheaper, cleaner energy future, and the OEB has already shown us the way… The OEB Decision gave consumers a choice, opening the door to less polluting and more affordable options, namely heat pumps (geo-exchange and/or air-sourced)!
* The government of Ontario must take serious, science-backed action to address the most important issue modern humans have ever faced - Climate Change. Climate Change is an existential threat to life on Earth, including our own. When considering population, Canada is one of the top 3 most climate polluting countries in the world on a per person basis. There is no denying that Canada is one of the ‘bad guys’, and we need to clean-up our act ASAP!
* Natural gas use in Ontario must be capped immediately, then reduced over the next several years to ensure GHG reductions consistent with the Paris Agreement. To be clear, methane (natural gas), is 80 times more potent than carbon dioxide over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period, hence is a major contributor to Canada’s climate pollution. We are already seeing the early effects of climate change around the world with more frequent and severe droughts and wildfires, as well as violent storms and flooding. These extreme weather events will only get worse, and closer to home, until we drastically reduce our GHG emissions!
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* Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles happened here in Ontario!
* There may be some hesitation due to concerns with the ability of Ontario’s electricity grid to support tens of thousands of heat pumps over the coming years, however the province is slowly moving in the right direction to address those concerns. Over a year ago, the IESO’s Dunsky Report provided the information needed by the government of Ontario to take us down the right path, Ontario can have sufficient electrical grid capacity for years to come by: 1) Building more renewable energy; 2) Incentivizing ‘demand response measures’ to manage energy peaks; and 3) Establishing energy storage capabilities. The Government of Ontario has recently begun to address items 1 and 3 – To achieve item 2, the government of Ontario can allow offshore wind generation in the great lakes and incentivize residential and small businesses to sell electricity (ex. Rooftop Solar) to the grid – Both initiatives would be consistent with the green energy transition we’re seeing around the world. More progress can be made if the government of Ontario expands the ‘Save on Energy Program’, to further incentivize the use of ground-source heat pump solutions that utilizes half the electricity of their air-source counterparts.

**For natural gas expansion projects receiving government support, should the approvals processes be streamlined to support affordable home heating for Ontarians? In what ways?**

* All but a few cases, may actually require natural gas for home heating. The process for these rare instances needs to be made extremely rigorous, to ensure that only those situations that cannot be addressed by alternative solutions (based on current technology) are approved and implemented. Emphasis should instead be placed on streamlining policy to ensure every home and building in Ontario has easy access to geo-exchange ground-source and/or air-source heat pumps.
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* Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles are happening here in Ontario!
* As there are alternatives to natural gas that are more affordable and less polluting, the role of natural gas in heating residential and small commercial buildings must be minimized, if not eliminated entirely. Preference should be given to modern, cost effective and non-polluting solutions such as geo exchange (ground source) heat pumps and air-source heat pumps. In other words, the government of Ontario must repeal Bill 165 and implement the OEB’s decision from December 21st, 2023. As a reminder, the OEB correctly concluded “The energy transition poses a risk that assets used to serve existing and new Enbridge Gas customers will become stranded. The risk that arises from the energy transition results from gas customers leaving the gas system as they transition to electricity to meet energy needs previously met by natural gas. This departure gives rise to assets that are not fully depreciated but are no longer used and useful. This results in stranded asset costs that Enbridge Gas would seek to recover from the remaining gas customers. This in turn would increase rates for those gas customers, leading more customers to leave the gas system, potentially leading to a continuing financial decline for the utility.” With business as usual, gas costs will spiral out of control. Once fossil gas lines are built-out, consumer choice is effectively lost and higher emissions & costs are ‘locked in’ for years to come. Bill 165 provides no solutions for the province’s looming energy cost and carbon pollution issues, it simply protects a super-profitable corporation and its shareholders. As Bill 165 forces the status quo upon us, it removes customer choice and increases costs while continuing to increase the Province’s GHG emissions. What we all need is a path to a cheaper, cleaner energy future, and the OEB has already shown us the way… The OEB Decision gave consumers a choice, opening the door to less polluting and more affordable options, namely heat pumps (geothermal and/or air-sourced)!
* Ontario should follow the lead from: over 50 California municipalities who have banned gas appliances from new buildings; the City of Vancouver who has introduced partial bans on fossil-fuel heating systems for all new and replacement installations starting in 2025; and the province of Quebec who have already introduced partial bans on fossil-fuel heating systems for all new construction… Ontario is falling further and further behind, increasing the cost of living for all Ontarians while making the climate crises worse than it needs to be!

**What role should natural gas play in supporting power system security and resiliency?**

* As natural gas power generation is not the most cost effective or environmentally friendly solution, it should not be considered a favoured source of electricity generation. Energy independence and cost stability can be better provided by a distributed network of renewable energy generation sources combined with energy storage. Local renewables provide economic resilience and protects against fluctuations in market driven energy prices - In contrast to fossil fuels, the pricing of local renewables is not based on global commodity trading, subject to large market swings, as a result, renewable energy prices are typically less expensive and more stable over time.
* Centralized fossil fuel burning power stations, as well as nuclear power plants, are especially susceptible to security breaches, on a scale that is not likely possible with a distributed network of renewables / storage. Also note that solar and wind produces power where it is needed, improving local system resiliency in the face of increasingly powerful storms, and reducing the need for expensive electricity network upgrades.
* As per the IESO’s Dunsky Report, Ontario can have sufficient electrical grid capacity for years to come by: 1) Building more renewable energy; 2) Incentivizing ‘demand response measures’ to manage energy peaks; and 3) Establishing energy storage capabilities. Taking more aggressive action in these areas will provide the security and resiliency Ontarians need from a power grid.
* The government of Ontario must prioritize and address the most important issue modern humans have ever faced - Climate Change. Climate Change is an existential threat to life on Earth, including our own. When considering population, Canada is one of the top 3 most climate polluting countries in the world on a per person basis. There is no denying that Canada is one of the ‘bad guys’, and we need to clean-up our act ASAP!
* Natural gas use in Ontario must be capped immediately, then reduced over the next several years to ensure GHG reductions consistent with the Paris Agreement. To be clear, methane (natural gas), is 80 times more potent as a heat trapping GHG than carbon dioxide over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period, hence is a major contributor to Canada’s climate pollution. We are already seeing the early effects of climate change around the world with more frequent and severe droughts and wildfires, as well as violent storms and flooding. These extreme weather events will only get worse, and closer to home, until we drastically reduce our GHG emissions!
* Even northerly Canada is feeling the financial pain of Climate Disasters as the summer of 2024 saw unnatural extreme weather events resulting in a record 228 thousand insurance claims - a 406% increase compared to the previous 20-year average. Ontario experienced an unnatural increase of storms last year that included more than an average number of tornadoes along with ‘once in a hundred years’ flooding - for the 3rd time in the past decade. 2024 insured losses related to these weather events set a record in Canada, reaching close to $8B.
* Climate change is costing Canada’s economy billions of dollars. Over the past decade, climate change is estimated to have reduced Canada’s GDP by $25 billion and affects low-income households the most. A large component of this loss and affordability struggles happened here in Ontario!
* Ontarians desperately need the government of Ontario to build more locally generated, non-polluting renewable energy, and energy storage, not natural gas fired generation. From a security and resiliency perspective, renewable energy, including solar and wind is the better path forward.
* The government of Ontario must recognize that Renewable Energy is on the rise globally, and Ontario is falling behind – Threatening prosperity to businesses and citizens in the province:
  + China is the global leader in renewable energy with nearly half of the world’s wind and solar capacity and are years ahead of schedule in doubling its utility-scale solar and wind power capacity well before 2030.
  + The USA now produces enough solar & wind energy to power >60m homes - 39M from wind (more than double from 10 years ago) + 22M from solar (8 times more than a decade ago). Energy storage capacity has also increased 100 fold in the past decade. Enough energy to power all of Canada!
  + The UK is the world leader in offshore wind energy, powering over 7.5 million homes. Northern Europe has used wind power for over 30 years and the industry now employs over 300,000 people. We can do the same.
  + Iceland powers 9 out of 10 homes with geothermal energy
  + Sweden is on track to reach their 2040 goal of 100% fossil-free renewable electricity production, without the use of nuclear energy!
* Countries generating significant amounts of electricity with wind and solar include: Denmark (67% of their electricity generation mix), Germany (40%), the Netherlands (40%), the U.K. (34%) and 28% in Australia. In the USA, Iowa generates 63% of their electricity with wind and solar, South Dakota 55%, as well as geographically large (and traditional petrostates) California 34%, and Texas 26%. Ontario can do the same.
* For comparison – The vast majority of Ontario’s current renewable energy comes from hydro (and nuclear) – Less than 13% of Ontario’s total electricity is generated by wind and solar, hence we have a huge opportunity to close the gap with other countries and remain economically competitive!
* Key benefits of a distributed renewable energy generation network include:
  + Economics: Locally generated, non-polluting solar and wind power, combined with energy storage, is the most cost-effective and quickest way to meet the rising demand for electricity. In fact, building solar or wind facilities combined with Energy Storage systems costs less than half that of constructing new gas ‘peaker’ plants or nuclear reactors. Once built, renewables operate over the long-term at very low cost as the “fuel” is essentially free.
  + Local Economy: Instead of a small percentage of shareholders profiting, local renewable energy generation recirculates energy generation profits and cost savings in the Region / Province.
  + Business Investment / Growth: Low carbon energy production attracts companies striving to reduce their GHG emissions. As customers demand more sustainable and eco-friendly products, companies with sustainable business practices (such as a zero-emission power) can attract new customers and maintain brand awareness.
  + Supply Chain Accessibility Opportunities: Major purchasers, including many government buyers and others require their suppliers to consistently increase sustainability and lower their carbon footprint.
  + Job Creation: Healthy businesses result in growth and new hiring. Local renewable energy generation facilities also create temporary and long-term employment.
  + Energy Independence / Cost Stability: Local renewable energy generation provides economic resilience and protects against fluctuations in market driven energy prices - In contrast to fossil fuels, the pricing of local renewables is not based on global commodity trading, subject to large market swings, as a result, renewable energy prices are typically less expensive and more stable over time.
  + Human Health and Well Being: Improved air quality and over-all health.
  + Climate Change Mitigation: A healthier natural environment will help protect us from the inevitable impacts of climate change

**What role should natural gas play in offsetting higher GHG-emitting fuel sources?**

* I’m not aware that Ontario has a material amount of a higher GHG-emitting fuel source than natural gas as methane (natural gas), is 80 times more potent as a heat-trapping GHG than carbon dioxide over a 20-year period and 28 times more potent than carbon dioxide over a 100-year period.
* Natural gas is NOT a transition fuel for transportation, electricity generation or building heat, as much cleaner alternatives already exist and are being used all around the world! From EVs, to renewables and heat pumps, there is little-to-no use for natural gas going forward.

**What are the challenges and opportunities for enhanced energy efficiency, adoption of clean fuels (e.g., RNG, Hydrogen) and emission reduction methods (e.g., carbon capture and storage) to lower emissions in the natural gas system?**

* There is no reason to attempt to lower the emissions from the natural gas system as cleaner, more affordable solutions already exist and are being successfully used around the world. From EVs, to renewables and heat pumps, there is little-to-no use for natural gas going forward. Ontario’s natural gas network should be shrunk year over year going forward.
* If you’re looking for improved energy efficiency, basic physics tell us that we can no longer burn things – It is way too inefficient! That is, fossil fuels must and can be replaced by more efficient technologies - Electric motors are more efficient than gas-powered engines, wind power is more efficient than gas-fired power plants, and heat pumps are many times more efficient than natural gas furnaces! Let’s stop trying to force a question to fit a desired answer!
* RNG, blue (or grey) hydrogen, along with CCUS are all false solutions when it comes to reducing GHG emissions and should not be pursued by the government of Ontario. Green hydrogen may have some useful applications, however not as a fuel for heating buildings or for electricity generation when there are so many better solutions (renewables, thermal district energy and heat pumps). CCUS may be useful for steel and cement making, however, other solutions exist for this as well. If industry wants to waste money on CCUS they can, however, Ontarian taxpayers should NOT be subsidizing them – Tax funds should be used to incentivize renewables, heat pumps and EV infrastructure instead.
* The bottom line is that fossil fuels, including natural gas (or RNG), have no role to play in reducing GHGs – We have no time for potential small incremental gains when we need massive reductions in GHG emissions ASAP and better, proven solutions already exist! Best to cut our losses as soon as possible and carefully shrink the natural gas footprint in Ontario.