

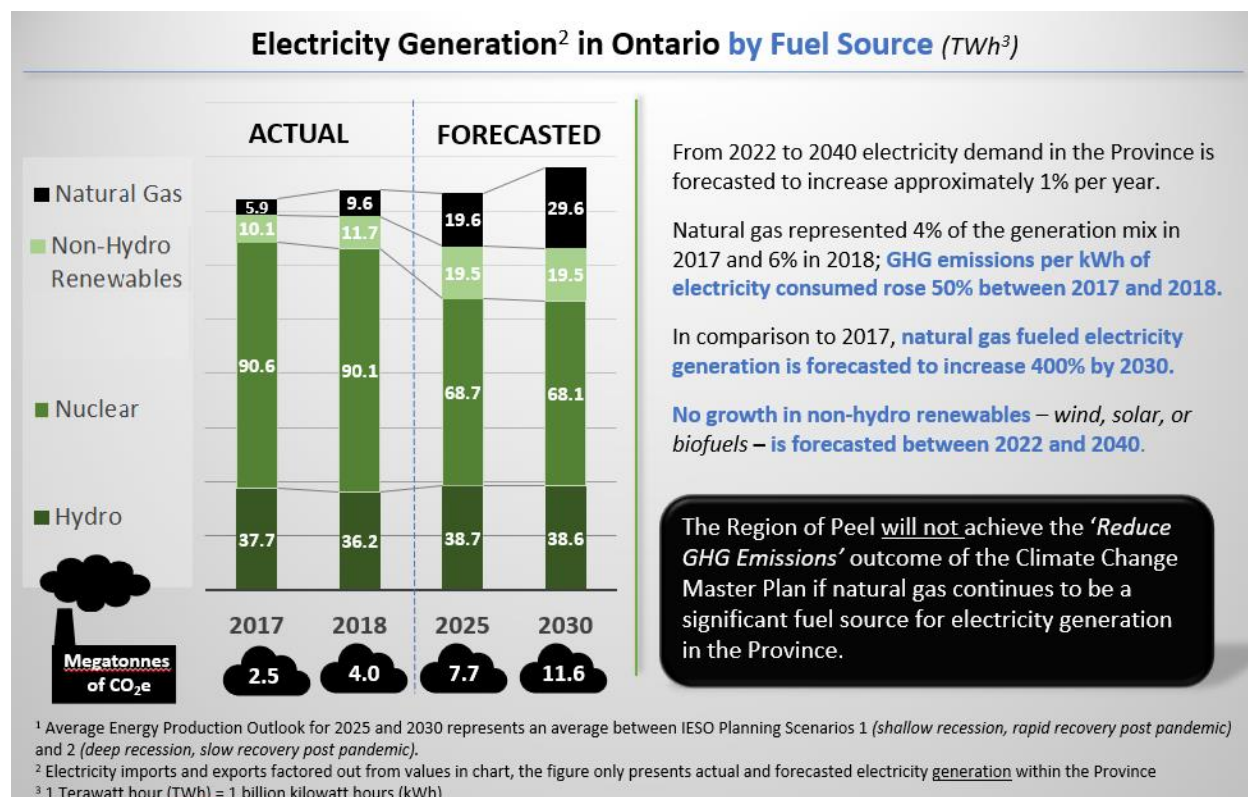
Appendix II – Supporting Information to Advocate to the Province to Phase Out Fossil Natural Gas Use for Electricity Generation

The use of natural gas for electricity generation is rising.

The Independent Electricity System Operator's (IESO's) Annual Planning Outlook is a long-term view of Ontario's electricity system. It forecasts electricity demand, assesses the reliability of the electricity system, identifies capacity and energy needs, and explores the province's ability to meet them. **The Outlook helps inform the decisions that will lay the foundation for a reliable and affordable electricity future.**

The graphic below summarizes major takeaways for the consideration of **Regional Council** as it relates to the proposed resolution for the Region of Peel to request the Province of Ontario set the legislative and policy framework to phase-out all fossil natural gas-fired electricity generation as soon as possible. The data analyzed in the graphic below was sourced from IESO's most recent Annual Planning Outlook, released in December 2020.

Figure A3.1



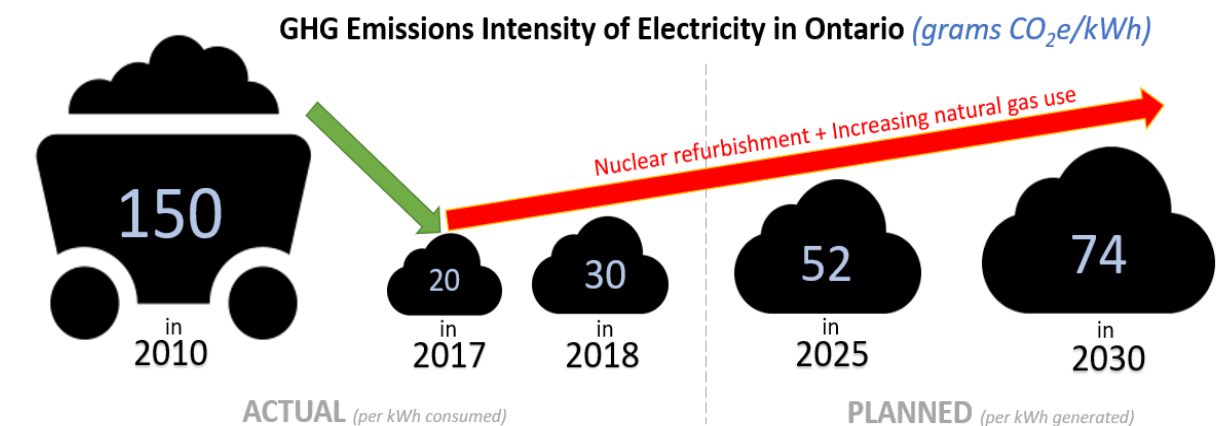
The Region and Province's targets are in jeopardy.

The Province's GHG Emissions Reduction Target is 30 per cent below 2005 levels by 2030, or going from 203 to 142.1 Megatonnes¹ (Mt) of CO₂e. Between 2017 and 2018, the Province's total GHG Emissions rose 10 Mt CO₂e, to 165 Mt CO₂e², and 15 per cent of this increase was attributed to more natural gas used³ to generate electricity.

The Region's 2030 'Reduce GHG Emissions' Target is 45 per cent below 2010 levels, or going from 137.3 to 75.5 kilotonnes (kt) of CO₂e. Between 2017 and 2018, the Region's GHG Emissions rose 8per cent; GHG Emissions associated with electricity use rose nearly 5 kt CO₂e and accounted for more than half of the Region's total increase.

Figure A3.2 below shows how clean Ontario's electricity became over the years since 2010, largely due to the coal phase-out. From 2017 to 2018, the GHG emissions intensity of electricity use in the Province rose 50 per cent, from 20 to 30 grams CO₂e per kWh. The impacts on both the Region's and Provincial GHG inventories were significant. Based on the Province's current projections for electricity demand and planned sources for supply, the GHG emissions intensity per kilowatt hour generated is forecasted to increase to 74 grams by 2030. These are levels that have not been observed since 2013.⁴

Figure A3.2



¹ 1 Megatonne = 1 million tonnes

² http://publications.gc.ca/collections/collection_2020/eccc/En81-4-2018-3-eng.pdf 2018 National Inventory Report Part 3: Table A11-12 and A13-7

³ Note: "Other Fuels" accounted for 3% of Ontario's total GHG Emissions associated with electricity production.

⁴ IESO 2020 Annual Planning Outlook – using data from Figures 24, 25, and 37; Note: Future projections are grams of CO₂e/kWh Generated in Ontario, unallocated energy and SF₆ could not be taken into account and have historically increased the Consumption intensity of electricity in the Province.

As outlined in Ontario's Environment Plan⁵, higher renewable content in fossil fuels (*e.g. renewable natural gas, ethanol in gasoline, and biodiesel*), significant efforts and investments in energy conservation and efficiency, and leveraging smart grid and distributed energy resources to optimize electricity storage and time of use all have the potential to dampen the GHG emissions intensity associated with energy use in the Province. The Region's Climate Change Master Plan calls for more electricity use over the next decade as transitioning vehicles and heating loads from fossil fuels such as gasoline, diesel, and natural gas to use **clean** electricity are best practice approaches to reduce GHG emissions after optimizing efficiencies. However, access to low carbon electricity will be essential for targets to be achieved

⁵ <https://prod-environmental-registry.s3.amazonaws.com/2018-11/EnvironmentPlan.pdf>

It will take coordinated effort for transformative change.

This section outlines the mandates, goals, and respective roles of key stakeholders in the proposed resolution to advocate for a phase out of fossil natural gas use for electricity generation in Province as soon as possible.

The Government of Ontario

The Provincial Government is responsible for developing a safe, reliable and affordable energy system for all Ontarians. It does this mainly through laws and regulations.⁶

Through the Ministry of Energy, Northern Development, and Mines, the Provincial Government:

- Oversees the regulatory framework for electricity pricing and develops policies to mitigate energy prices for Ontario consumers and businesses;
- supports energy efficiency and conservation; and,
- supports the growth of clean technology and innovation in the electricity sector⁷

Through the Ministry of the Environment, Conservation and Parks, the Government is responsible for protecting and improving the quality of the environment, while lowering GHG emissions and helping communities prepare for climate change⁸. Through 'A Made-in-Ontario Environment Plan,' the Ministry of the Environment, Conservation and Parks seeks to increase access to **clean** and affordable energy for families through many initiatives including:

- Encouraging the use of heat pumps for space and water heating where it makes sense;
- requiring natural gas utilities to implement a voluntary renewable natural gas option for customers; and,
- supporting the integration of emerging smart grid technologies and distributed resources – including energy storage – to harness and make best use of Ontario's clean electricity.

⁶ Ontario's energy sector | Ontario Energy Board (oeb.ca)

⁷ <https://www.ontario.ca/page/ministry-energy-northern-development-and-mines>

⁸ <https://www.ontario.ca/page/made-in-ontario-environment-plan#section-3>

The Ontario Energy Board (OEB)

The Ontario Energy Board regulates Ontario's energy sector in the public interest. The OEB ensures natural gas and electricity companies follow the rules. As an independent government agency, the OEB's goal is to promote a **sustainable**, reliable energy sector that helps consumers get value from their natural gas and electricity services.⁹

Under the Ontario Energy Board Act, 1998, the Minister of Energy, Northern Development and Mines may issue, and the Ontario Energy Board shall implement, directives that have been approved by the Lieutenant Governor in Council in relation to certain matters. Previously issued directives by the Minister of Energy, Northern Development and Mines to the Ontario Energy Board can be found via the link below.

<https://www.oeb.ca/industry/policy-initiatives-and-consultations/directives-issued-oeb>

The OEB licenses the IESO and sets the fees that can be charged to ratepayers for electricity.

The Independent Electricity System Operator (IESO)

The IESO balances the supply of and demand for electricity in Ontario in real-time. It directs the flow of electricity across the province's transmission lines, connecting generators that produce power, transmitters that send it across the province, local utilities that deliver it to people's homes and businesses, and industrial companies that use it in large quantities. The **IESO plans the power system** and makes sure Ontario has enough electricity over the long term. It also coordinates conservation efforts across the province.

The Ministry of Energy, Northern Development and Mines issues directives and letters to the IESO articulating government policy. Previously issued directives can be found via the link below.

<https://www.ieso.ca/corporate-ieso/ministerial-directives>

⁹ Ontario's energy sector | Ontario Energy Board (oeb.ca)

Leading Municipalities are on board

The following are links to similar municipal council resolutions calling for the phase out of fossil natural gas use for electricity generation in the Province over the next decade.

Table A3.1

Municipality	Motion Date and Link
City of Mississauga	March 3, 2021 Mississauga calling on province to phase out gas-fired power plants insauga.com https://pub-mississauga.escribemeetings.com/FileStream.ashx?DocumentId=9998 Motion 16.1
City of Brampton	March 3, 2021 eSCRIBE Agenda Package (escribemeetings.com) 12.3.1 CW098-2021
City of Toronto	March 10, 2021 http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2021.DM30.3
City of Kitchener	October 26, 2020 https://www.cleanairalliance.org/wp-content/uploads/2020/10/kitchener.pdf
Town of Cobourg	December 7, 2020 https://pub-cobourg.escribemeetings.com/Meeting.aspx?Id=7817111f-86c9-48ad-bd9a-e91f707240da&Agenda=Merged&lang=English&Item=35&Tab=attachments
Town of Halton Hills	October 26, 2020 https://www.cleanairalliance.org/wp-content/uploads/2020/10/halton.pdf
City of Hamilton	November 11, 2020 https://www.cleanairalliance.org/city-of-hamilton-calls-for-the-phase-out-

Appendix II
2020-2030 Climate Change Master Plan: 2020 Annual Progress Report

	<p>of-ontarios-gas-fired-power-plants-by-2030/</p> <p>General Issues Committee - November 04, 2020 (escribemeetings.com)</p>
City of Burlington	<p>November 23, 2020</p> <p>https://burlingtonpublishing.escribemeetings.com/Meeting.aspx?Id=28d82a9d-2dea-415e-a472-14fdbfd69758&Agenda=Agenda&lang=English&Item=39&Tab=attachments</p>
City of St. Catharines	<p>December 2, 2020</p> <p>https://www.stcatharinesstandard.ca/news/council/2020/12/02/council-notebook-gas-fired-power-plants-should-be-phased-out-city-council-says.html</p>
City of Guelph	<p>December 14, 2020</p> <p>https://drive.google.com/file/d/1v715OhtugCb5F94Dv9TEotitbL0jXAY6/view</p>