

The Regional Municipality of Durham Information Report

From: Chief Administrative Officer

Report: #2024-INFO-25 Date: April 12, 2024

Subject:

Update on provincial energy sector activities

Recommendation:

Receive for information

Report:

1. Purpose

1.1 To summarize provincial energy sector activities and reports toward a long-term energy planning framework, activities impacting regulation, new infrastructure and investments.

2. Background

- 2.1 The global energy context is shifting towards cleaner and greener energy options that promote long-term sustainability including improved energy efficiency and lower greenhouse gas (GHG) emissions, and that stimulate economic opportunity.
- 2.2 On February 16, 2024, the federal government released an update on the <u>Clean Electricity Regulations</u> (CER) which calls for a net zero electricity sector nationwide by 2035. The final regulations are expected to be published in the Canada Gazette, Part II, later this year.
- 2.3 After more than a decade consisting generally of sufficient and sometimes excess supply, Ontario is entering a period of emerging electricity system needs. IESO's Reliability Outlook predicts the electrical grid is prepared for the next 18 months through summer 2025. If extreme weather materializes, reliability will be ensured by relying on up to 2,000 megawatts (MW) of imported electricity from neighbouring jurisdictions or other operating actions. According to the IESO, overall, Ontario is operating within a period where generation and transmission outages are more challenging to manage.

- 2.4 Through its <u>Annual Planning Outlook</u>, the IESO anticipates a supply shortfall of approximately 5,000 MW of demand and 15 terawatt-hours (TWh) of consumption arising over the 2030-2034 period as a result of increasing demand and expiring generation contracts. Ontario's supply mix post-2035 is highly dependent on the evolution and timing of government policy.
- 2.5 A clear policy direction is necessary for Ontario to remain a competitive leader in the energy economy and proactively address the impacts of climate change. The energy transition, decarbonization (including increased electrification) and increased demand affect every sector and influence the ability to achieve provincial and federal priorities related to housing, reconciliation with Indigenous communities, public revenue generation and more.

3. Ontario's Clean Energy Opportunity Report

- 3.1 On January 19, 2024, the province published <u>Ontario's Clean Energy Opportunity:</u> Report of the Electrification and Energy Transition Panel (EETP). The report provides insights and recommendations for Ontario's energy transition and builds on the Powering Ontario's Growth plan.
- 3.2 The province established the Panel in April 2022 to:
 - a. Advise the government on the highest value short-, medium-, and long-term opportunities for the energy sector to prepare for the energy transition.
 - Identify strategic opportunities and planning reforms to support emerging electricity and fuels planning needs in the context of energy demand, emerging technologies, environmental considerations and overall costs to consumers.
- 3.3 The report is based on engagement with selected stakeholders, including municipalities, the Ministry of Energy, IESO, and other energy companies and focuses on several key actions that would support the transition to clean energy and electrification, calling for:
 - a. A provincial "north star" commitment to develop a clean energy economy by 2050 and align multiple levels of government and the private sector on this goal, supported by a strategic and proactive policy vision articulated by the Ministry of Energy.
 - b. Strengthening partnerships with Indigenous communities and creating opportunities to mutually benefit from a clean energy economy.
 - Planning that includes long-term public support through community engagement to understand and respond to consumer perspectives on affordability and reliability.
 - d. A renewed, well-resourced, and apolitical energy planning framework that supports decisions closer to the community and residents, built on the expertise of local distribution.

- e. A focus on the economic opportunities afforded by the clean energy economy and an open investment environment, that can drive social change, sustainability and a prosperous future for all.
- 3.4 The report includes 29 recommendations across the following five categories: Planning for Electrification and Transition, Governance and Accountability, Indigenous Partnerships, Innovation and Economic Development, and Consumer, Citizen and Community Perspectives. Highlights include:
 - a. Leveraging the strengths of municipalities to lead Comprehensive Local Energy Planning (<u>Durham Community Energy Plan</u>) and empowering local decision-making to achieve community energy and climate goals;
 - b. Strengthened roles for the OEB and IESO in energy thought leadership and bulk/regional electricity system planning;
 - Development of new tools and strategies to guide the energy transition, such as a provincial long-term energy plan to guide technical plans and local tables that foster alignment between energy stakeholders;
 - d. Ministry policy direction on how the transition will be funded, in a manner where all beneficiaries pay rather than borne entirely by ratepayers;
 - e. Direction on the role of natural gas in Ontario's energy supply mix supported by strategies that foster natural gas/electrical coordination and decarbonization.
- 3.5 The recommendations in the report are expected to have several implications for the Region:
 - a. Economic Growth:
 - The transition to a clean energy economy presents significant economic growth opportunities for Durham Region. As the Clean Energy Capital of Canada, the Region is poised to benefit from increased investment, job creation, and sustainable development in the energy sector.
 - b. Innovation:
 - Durham Region is well-positioned to contribute to and benefit from technological innovations in areas such as hydrogen, transmission infrastructure, electric vehicles, and nuclear energy.
 - c. Indigenous and Community Engagement:
 - Future updates to the Durham Community Energy Plan should further demonstrate public buy-in, consumer perspectives, and consider Indigenous partnerships.
 - d. Natural Gas:

- Collaboration between electrical and natural gas distributors, particularly
 on demand forecasting, will need to be clear. The Region is also
 working in collaboration with Enbridge Gas to advance work on
 numerous corporate and community decarbonization initiatives,
 including the Durham Greener Homes program, the Durham Green
 Development program, and affordable housing retrofits, among others.
- 3.6 Ontario's Clean Energy Opportunity Report is aligned with the Durham Community Energy Plan in recognizing the opportunities afforded by the clean energy economy, focusing on community leadership and expertise, and highlighting the importance of a well-managed energy transition and long-term integrated planning to accelerate decarbonization while maintaining affordability.
- 3.7 An analysis of the panel's recommendations with potential Regional impacts is included in Attachment 1.
- 4. Ontario Energy Board (OEB) Enbridge Gas Inc. Decision Summary and Proposed Amendments to Ontario Energy Board Act
- 4.1 The OEB issued a <u>decision</u> on December 21, 2023, requiring developers to pay upfront for natural gas service connections to new homes, ending the practice of recovering these costs over 40 years from all ratepayers on the basis that the practice was no longer financially viable in the context of the energy transition and with customer transition away from natural gas as heating equipment is replaced will result in stranded assets and unacceptable cross-subsidization to be borne by existing natural gas users. This decision is expected to improve market competitiveness, reduce risks and costs related to stranded underutilized capital assets and provide homeowners with more financial choice and for existing households price certainty and affordability. The decision is consistent with a recommendation from the report of the Electrification and Energy Transition Panel that the OEB review cost allocation and recovery policies for natural gas and electricity connections (Recommendation 15).
- 4.2 Currently, the subsidy to developers is worth an average of \$4,400 per home. This incentivizes developers to install natural gas-fired heating equipment rather than low carbon alternatives like air or ground source heat pumps or available district energy systems with lower monthly operating costs. Under the OEB ruling, developers of new homes would be required to pay this amount up-front for natural gas service connections. Currently, builders are required to pay up-front for electricity service connection costs, which increases revenue for municipally owned electricity distribution companies (e.g., Oshawa PUC Networks and Elexicon Energy).
- 4.3 The building sector is a priority area for action, as it represents more than 30 per cent of total GHG emissions in Durham Region. Given planned population growth, it will be a key area of activity to align the Region with Canada's commitment to reach net zero GHG emissions by 2050. The OEB decision is consistent with Regional

- Council's direction and commitment to decarbonization and efforts to achieve net zero corporately by 2045.
- 4.4 Ontario Minister of Energy, Todd Smith, announced his intention to overrule the OEB's decision on December 22, 2023.
- 4.5 Enbridge Gas President, Michele Harradence, circulated a letter to municipal councils on January 31, 2024, encouraging opposition to the OEB decision.
- 4.6 In response to the above decision from the Ontario Energy Board, on February 22, 2024, the province proposed regulatory amendments to the *Ontario Energy Board Act*, 1998 to "provide the government with the authority to ensure fair and informed decision-making at the OEB to foster affordable communities" (019-8307). The province is proposing four legislative changes:
 - a. Broad Stakeholder Participation:
 - The government is proposing legislative amendments to facilitate broad stakeholder participation in OEB proceedings and other stakeholder input to the OEB related to natural gas and electricity. If these amendments are passed, the government may propose regulations to require the OEB to provide notification to and invite participation or testimony from specific stakeholders or economic sectors that could be significantly impacted by an upcoming decision or hearing.
 - b. Ministerial Directives for Generic Hearings:
 - The government is proposing legislative amendments that would provide the Minister of Energy with the authority to issue directives, approved by Cabinet, requiring the OEB to hold a generic hearing on any matter respecting natural gas or electricity. Generic hearings are used to address one or more issues common to multiple regulated entities, which may require input from a broader set of participants.
 - c. Prescribing the Revenue Horizon:
 - The government is proposing legislative amendments to provide the government with time-limited authority to prescribe the "revenue horizon" over which natural gas utilities calculate the upfront cost required for new natural gas connections for residential, small commercial and other customers.
 - d. Ministerial Directives for Cost Allocation Conditions for Natural Gas Transmission Projects:
 - The government is proposing legislative amendments to provide the Minister of Energy with the authority to issue directives, approved by Cabinet, requiring the OEB to accept certain cost allocation conditions in

reviewing a leave to construct application for a natural gas transmission project.

4.7 On March 27, 2024, Regional Council directed staff to report back on the OEB Enbridge Gas Inc. decision and proposed amendments to the Ontario Energy Board Act. A more fulsome report will be presented to Council in spring 2024.

5. IESO Procurements and upcoming Regional Planning Process for GTA East

- 5.1 The IESO secures new energy supply for Ontario's grid through competitive procurements. The IESO is conducting a series of large-scale procurements to secure sufficient supply into the 2030s and beyond.
- 5.2 Proponents are required to demonstrate municipal support for their project through a Municipal Support Resolution (project-specific) or a Blanket Municipal Support Resolution.
- 5.3 Long-Term 1 Request for Proposal (LT1 RFP)
 - a. The LT1 RFP is expected to competitively procure approximately 2,500 MW of year-round effective capacity from new build and eligible expansion dispatchable electricity storage facilities.
 - b. The LT1 RFP closed on December 12, 2023. The IESO is expected to announce selected proponents in Q2, 2024.

5.4 Looking Ahead:

- a. The IESO plans to run regular procurements over the next 4 to 6 years. The first of these procurements, the Long-Term 2 Request for Proposal (LT2 RFP), is expected later this year and will seek to secure approximately 2,000 MW of non-emitting energy-producing resources (wind, solar, hydroelectric, storage, re-powered facilities, and bioenergy) that can be in service by 2030.
- b. Indigenous and community engagement will continue to be mandatory requirements under LT2 RFP, and the IESO is proposing that municipal support become a mandatory requirement, in addition to Indigenous community support. Engagement for the LT2 RFP began in December 2023. The proposed deadline for proponent submissions is mid-2025.

5.5 Regional Planning Process: GTA East

- a. The IESO's <u>Regional Planning Process</u> enables transparent, coordinated, and cost-effective planning of regional electricity infrastructure to ensure a reliable supply of electricity. The IESO's Regional planning looks at the unique needs of each region and considers conservation, generation, transmission and distribution, and innovative resources to meet these needs and makes near-term, mid-term and long-term recommendations.
- b. The <u>GTA East region</u> extends from Lake Ontario northward to the southern parts of Scugog and Uxbridge and includes the municipalities of Pickering,

- Ajax, Whitby, Oshawa and parts of Clarington. The GTA East region is served by Elexicon Energy, Hydro One Networks Inc., and Oshawa PUC Networks.
- c. The Regional Planning cycle will be initiated in the summer of 2024 with the completion of the Needs Assessment (60 days) followed by a Scoping Assessment (90 days), and Integrated Regional Resource Planning (IRRP) (18 months).
- Regional staff are working in collaboration with area municipalities and respective LDCs to collect and convey municipal outputs to improve LDC load forecasts.

6. Ontario's Plan to Refurbish Pickering Nuclear Generating Station

On January 30, 2024, the Ontario Government announced it would support Ontario Power Generation's (OPG) plan to refurbish Pickering Nuclear Generating Station's "B" (Units 5 to 8). Pending regulatory approval following the Canadian Nuclear Safety Commission (CNSC) hearing this June, the remaining units will be shut down in December 2026, then defueled and dewatered so that refurbishment activities can begin. As units return to service, they will be reconnected to the grid. All four refurbished reactors will be back in service by the mid-2030s, pending regulatory approval. While a full cost estimate for the project is not currently available, OPG plans to spend \$2 billion on engineering, design work, and securing essential long-lead components during the initial project initiation period.

6.2 Impact and benefits:

- a. The construction phase will create around 11,000 jobs per year and once the station is refurbished, the plant will continue to provide over 6,400 jobs for decades.
- b. The project aims to secure continued operations for more than 2,100 MW of clean, reliable nuclear generated electricity for Ontario, ensuring energy supply for over 30 years, equivalent to powering two million homes and businesses.

6.3 Economic and environmental considerations:

- a. The refurbishment is expected to have a significant economic impact, increasing Canada's gross domestic product (GDP) by about \$19.4 billion over the project period.
- b. By maintaining and securing highly skilled jobs, the project contributes to the local workforce and will stimulate the local economy.
- c. The refurbished Pickering Nuclear Generating Station will continue to produce GHG emission-free electricity.
- 6.4 This work is consistent with Powering Ontario's Growth Plan, which also includes new nuclear development work at the Bruce Power site near Kincardine and the three additional small modular reactors (SMRs) at Darlington Nuclear Generating Station.

7. Hydrogen Investments

- 7.1 Low-carbon hydrogen can be used to generate electricity or power vehicles, businesses, industries and heat homes, while producing little to no GHG or other pollutants. In early 2023, the government announced a three year \$15 million dollar Hydrogen Innovation Fund as part of the province's Low-Carbon Hydrogen Strategy. The IESO's Pathways to Decarbonization Report found the province could require up to 15,000 MW of hydrogen generation capacity by 2050 to meet peak demands, replacing the role currently played by natural gas generation. The province has indicated that by 2050, the hydrogen economy could create over 100,000 jobs across Ontario.
 - a. In October, the province <u>announced</u> the first six projects valued at \$7.5 million.
 - b. In November, the province <u>announced</u> an additional nine projects valued at \$5.9 million.

8. Previous Reports and Decisions

- 8.1 The following reports have been presented to Regional Council:
 - Report #<u>2023-INFO-86</u>, Provincial energy sector activities and reports toward a long-term energy planning framework and Ontario's Plan for a Clean Energy Future
 - Report #<u>2021-COW-7</u>, Regional Submission to the Review of Ontario's Long-Term Energy Planning Framework (ERO #019-3007)
 - c. Report #2016-COW-98, Regional Response to Planning Ontario's Energy Future (EBR # 012-8840):
 - d. Report #2015-J-21, Update on Energy Planning and Energy Sector Initiatives in Durham Region;
 - e. Report #2013-J-23, Update on Provincial Energy Planning Consultations, Regional Staff Participation and Opportunity for Regional Council Input to the Reviews of Ontario's Long-Term Energy Plan (EBR #011-9490) and Conservation and Demand Management Framework (EBR #011-9614).

9. Relationship to Strategic Plan

- 9.1 This report aligns with/addresses the following strategic goals and priorities in the Durham Region Strategic Plan:
 - Goal 1: Environmental sustainability Objective 1.1, Accelerate the adoption of green technologies and clean energy solutions through strategic partnerships and investment.
 - b. Goal 1: Environmental sustainability Objective 1.4, Demonstrate leadership in sustainability and addressing climate change.
 - c. Goal 3: Economic Prosperity Objective 3.4, Capitalize on Durham's strengths in key economic sectors to attract high-quality jobs

9.2 This report also aligns with the Region's <u>declaration of a climate emergency</u> on January 29, 2020, and aligns with the <u>Durham Community Energy Plan</u>, the <u>Corporate Climate Change Action Plan</u>, <u>Corporate Energy Conservation and Demand Management Plan</u>, and <u>Empowering the Community: Durham's Nuclear Sector Strategy</u>.

10. Conclusion

- 10.1 Regional staff continue to work towards decarbonizing Regional operations and our communities through efforts to support the development and deployment of decentralized systems as well as continued advocacy towards the establishment of additional renewable and low carbon generation capacity.
- 10.2 Regional staff will continue to monitor for changes to Ontario's long-term energy planning framework and Canadian Nuclear Safety Commission (CNSC) regulatory proceedings and report to Council as required.

11. Attachments

Attachment #1: Analysis of the EETP recommendations with potential Regional impacts

Prepared by: Caitlin Rochon, Manager, Corporate Initiatives, at 905-668-7711 extension 6263 and Madilyn Darrach, Policy Advisor with input from the CAO's Office, Planning and Economic Development, Finance and Works Departments.

Approved by: Sandra Austin, Executive Director, Strategic Initiatives at 905-668-7711 extension 2449.

Respectfully submitted,

Elaine C. Baxter-Trahair Chief Administrative Officer

Attachment 1: Analysis of the Electrification and Energy Transition Panel's recommendations in Ontario's Clean Energy Opportunity Report with potential Regional impacts

Rec. #	Description/Summary	Analysis
1	Provincial government should develop and communicate a commitment and associated policy principles for achieving a clean energy economy for Ontario by 2050.	This goal is generally aligned with the goals in the Durham Community Energy Plan (DCEP), for community GHG targets of 80% below 2007 levels by 2050. However, the recommendation does not necessarily include specific energy or climate targets. Driving towards a clean energy economy can support the Region's economic development and climate goals.
3	The provincial government should continue to seek alignment and coordination of clean energy economy objectives, standards and policies with other governments; [including] engagement with municipalities to ensure they are aligned with and supported in the energy transition, including support for Comprehensive Local Energy Planning and requiring local energy utilities and municipalities to engage and collaborate on energy planning matters.	Durham Region has a comprehensive community energy plan in place (i.e., DCEP) and collaboration mechanisms established. Provincial commitments to engagement can support the Region's articulated goals.
5	The Ministry should maintain an integrated long-term energy plan to guide development of technical energy plans, strategies, and actions to support the transition. The plan should provide direction, regulatory recommendations and legislative revisions (as needed) across electricity, natural gas and other fuels on the production, transmission, distribution, consumption, and conservation and demand management of energy.	A provincial long-term energy plan could serve to guide action, set common goals and priorities in discussions between the Region, local area municipalities (LAMs), and local distribution companies (LDCs) on production, distribution, demand management etc. The DCEP may need to be updated to ensure alignment

Rec. #	Description/Summary	Analysis
		with a future long-term energy plan.
6	The Ministry of Energy should provide policy direction on the role of natural gas in Ontario's future energy system as part of its next integrated long-term energy plan. The outcome should be to manage the system optimization and fuel switching necessary to achieve a clean energy economy at a pace that maintains affordable, reliable and resilient energy service. The analysis should focus on impacts on different populations, leveraging energy efficiency programs, updating building codes and standards, and decommissioning/right-sizing gas infrastructure.	Moving away from non-renewable natural gas is a priority in the DCEP. A provincial policy direction on a natural gas transition may have implications for the rate setting for natural gas customers across the region and for the Region itself, thus impacting their billing. The Region should advocate for fair impacts that incentivize the transition to clean energy, in alignment with sustainability goals.
7	The Ministry of Energy should develop a strengthened framework for local energy planning and decision-making and take steps to facilitate its implementation. The goal should be to develop mature Comprehensive Local Energy Planning processes through which communities can effectively contribute to Ontario's energy transition and meet their own goals. There should be transparency on cost implications and rate impacts. Communities should establish a table for aligning on issues and reconciling priorities, municipalities should lead and use this to achieve their own energy and climate goals. The provincial government should ensure that municipalities have capacity and resources to carry out this work. Engagement on Comprehensive Local Energy Planning must involve a broad set of local interests and stakeholders, including electric and gas distribution utilities. The outcomes will form important	This recommendation is intended to support municipalities, communities and local businesses and acknowledge they are in the best position to participate in energy decision-making and can pursue energy objectives. The DCEP was developed in partnership with the area municipalities, LDC's and other local organizations and industries and benefited from robust stakeholder engagement. This recommendation seeks to strengthen the local energy planning process to ensure plans are fully costed and account for electricity or natural gas rate implications and to ensure that municipalities have the resources required to adequately participate in

Rec. # Description/Summary

16

input into technical electricity and gas distribution planning and IESO-led (regional) planning, respectively. This process would not replace the existing technical IESO-led Regional Planning process.

The Ministry of Energy and the Ministry of Municipal Affairs and Housing should coordinate to ensure that the province and municipalities are aligned on landuse planning as it relates to energy infrastructure, and to determine how to best support municipalities in leveraging support/ incentives from the province/federal government to support economy-wide decarbonization.

The Ministry of Energy, working with the OEB, IESO, LDCs, municipalities and natural gas utilities, should develop a formal and transparent co-ordination framework that sets out the scope and objectives for enhanced planning co-ordination at the bulk, regional, and distribution levels to pace and facilitate the fuel-switching, system optimization and enhanced levels of energy efficiency required by the clean energy economy.

The framework should ensure that each party's technical expertise is leveraged to achieve the desired policy outcomes. This would include any required directives, regulatory changes, oversight mechanisms, and a clear and agreed upon understanding of specific roles and responsibilities for the entities involved. The framework should include regulatory requirements requiring different entities to coordinate bulk planning, regional planning, standardized approaches to demand forecasting at the distribution

Analysis

regulatory and planning processes.

More clarity and guidance related to the alignment of land use planning and energy infrastructure would be beneficial for both decarbonization efforts and the construction of timely and effective energy infrastructure. Ensuring that regional planning of energy needs and infrastructure through the IESO is a clear and concise process would help municipalities best support this recommendation.

If adopted, the province would need to be clear on how this does not duplicate existing processes for regional and bulk planning coordinated by the IESO in collaboration with the OEB, LDCs, and municipalities. This recommendation is intended to enhance collaboration between electrical and natural gas distributors, by requiring coordinated bulk system planning and, in collaboration with LDCs, coordinated regional planning. This process would need to set common transition goals and ensure natural gas companies are on board.

Rec. #	Description/Summary	Analysis
	level. OEB should evaluate plans for natural gas/electric coordination.	
23	Recognizing the key role that clean, affordable and reliable energy will play in the development of globally competitive and future-oriented industries, the ministry should be clear on the shifted risk-return balance between reactive and proactive planning, and ensure that planning, permitting and approvals processes are clear, predictable, effective and efficient and lead to timely decisions and project development that have public support.	This recommendation may have implications for existing planning and permitting processes re: public support. A balance would need to exist to ensure public support does not substantially delay transition to clean energy infrastructure. The Region may support the shift to a proactive planning framework, particularly with respect to attractive competitive industry and investment in the Region.
25	The government should clearly set out a policy vision for how electrification and the energy transition will be funded, and a range of funding options and mechanisms should be considered and used, including taxpayer funding, ratepayer funding, investment subsidies, investment tax credits, as well as leveraging and/or requiring private funding whenever possible. Opportunities to leverage funding from federal and municipal sources should also be pursued to the greatest extent possible. The key guiding principle should be that the beneficiary pays, with the understanding that the definition of who the beneficiary is in the energy transition is broader (including tax base).	It is not clear which municipal funding sources the recommendation is referring to. The Region may seek to advocate for more contributions from the provincial and federal government to offset costs to ratepayers and potential municipal funding.
26	The government, IESO and OEB should play a key role in engaging with the public and Indigenous partners to ensure transparent access to high-quality information and meaningful opportunities to participate in decision-making in order to build greater support and involvement	Enhanced engagement with Indigenous communities in the Region may be required to meet this recommendation, particularly towards

Rec. #	Description/Summary	Analysis
	in the energy transition. As part of other processes or on their own this work should include but not be limited to: Fostering community-level engagement and empowering local communities to make informed energy planning decisions in support of new energy projects and technologies that best suit their local energy needs.	opportunities of mutual benefit and economic reconciliation. Increased public support will foster a smoother transition but there are risks the public may oppose certain types of clean energy infrastructure being built.
29	The government, IESO and OEB should support capacity building for utilities and communities to conduct assessments of climate change impacts to energy infrastructure and to support effective climate resilience efforts and adaptation planning/ implementation. Any costs borne from investments in adaptation should not unfairly impact on low-income consumers, consumers in specific geographic regions that face higher electricity costs, consumers that rely on medical device(s) requiring a lot of electricity or other vulnerable consumers.	There may be opportunities to source resources for analyzing climate change impacts to energy infrastructure within the Region and facilitate adaptation planning. Which level of government subsidizes the costs of transition for vulnerable customers is yet to be made clear, however other recommendations in the report refer to enhanced provincial tax breaks, subsidies, and clean home energy programs.