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Renewable Procurements

Q1. Government policies resulted in an oversupply, particularly of high-priced renewable energy, that greatly increased prices. How will the 2017 LTEP address this?

Over the last decade, the government has rebuilt our transmission and distribution grid, invested in clean generation and closed the last coal-fired power plant. Ontario's electricity system is now 90 per cent free of greenhouse gas (GHG) emissions that cause climate change. Nearly \$70 billion has been invested in Ontario's electricity system to ensure it is clean and reliable.

These investments enable the government to focus on reducing system costs to put downward pressure on electricity prices over the longer term. Our robust energy supply puts us in a good position to plan for and meet future challenges, such as improving efficiency, increasing transparency and enhancing opportunities for innovation and competition in order to further reduce system costs.

While we currently have an adequate supply of electricity, a shortfall in capacity is expected beginning in the early-to-mid 2020s as the Pickering Nuclear Generating Station reaches its end of life, and nuclear units at Darlington and Bruce are temporarily removed from service for refurbishment. This need for additional capacity will be met through initiatives under the Independent Electricity System Operator's (IESO) Market Renewal initiative. Market Renewal will redesign the province's electricity markets to ensure a more flexible, cost-effective and competitive procurement process that better reflects system needs.

As part of Market Renewal, IESO and its stakeholders are designing competitive and transparent mechanisms to procure new supply resources, including a capacity auction. A capacity auction would allow existing and new clean generation facilities to compete in a robust market with clean imports, demand-side initiatives and new emerging technologies.

The project is expected to save up to \$5.2 billion over a 10-year period and forms a key component of Ontario's plan to ensure the affordability of electricity in the longer term.

Q2. Can you provide some examples of how Ontario communities are benefitting from Ontario's renewable policies?

When municipalities play an active role in the renewable energy development process, they help to ensure that renewable energy projects meet community needs.

Ontario's clean energy initiatives have attracted billions of dollars in investments, and helped create thousands of clean energy jobs across the province.

A highlight of Ontario's renewable energy programs has been the success that individuals, schools, places of worship, municipalities, co-operatives and Indigenous communities have had in participating in clean energy projects. From smaller home or farm-sized projects to larger community-scale projects, Ontarians are using renewable energy projects to meet their community's electricity needs, while reducing their demand on the provincial electricity grid.

- The IESO offered 390 new FIT contracts as part of the 5th and final phase of the Feed-in Tariff (FIT) program.
- 81 percent of these successful FIT 5 applications had Indigenous, municipal, public sector or community participation¹.
- Over 60 First Nation and Métis communities and groups are participating in over 700 FIT renewable energy projects.
- Over 26,000 ² microFIT projects are feeding clean power to the grid.

Some municipalities and school boards have raised money by renting their rooftops to solar panel developments, bringing financial benefit to their communities and more clean, renewable energy to the province.

Ontario communities that have developed their own projects, or partnered on or hosted others', can also benefit from increased revenues. Funds communities earn from renewable energy projects can be re-invested in other local projects.

The Ministry of Energy's Municipal Guide to Renewable Energy Development showcases a few of the many municipalities and Indigenous communities that are benefiting from Ontario's renewable energy policies, including:

- the Cities of Guelph, London, Windsor, Brockville and North Bay;
- the Ojibways of the Pic River First Nation;
- the Municipality of South Dundas; and
- the Chapleau Cree First Nation.

The Guide also highlights Ontario's partnership with Samsung, which has led to significant investments in Ontario, and helped create a thriving clean energy industry in the province.

Green Energy Investment Agreement

Through the Green Energy Investment Agreement (GEIA), Samsung is investing \$5 billion in the province of Ontario.

All of Samsung's Phase 1 and 2 projects and two Phase 3 solar projects are now online, consisting of 869 MW of wind and 300 MW of solar.

Both of the two remaining Phase 3 wind projects are now under construction.

¹ Source: IESO website

<http://www.ieso.ca/en/sector-participants/feed-in-tariff-program/news-and-updates/contract-offers-for-fit-5---september-20-2017>

² Source: IESO Q3 progress report data

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Samsung is also making significant financial contributions to local communities where their projects are located, including significant partnerships with Indigenous communities. For instance, the Six Nations of the Grand River is a 10% equity partner in the recently-completed Grand Renewable Energy Park project in Haldimand County.

The project consists of 150 MW of wind energy capacity and 100 MW of solar capacity. Samsung's equity arrangement with the Six Nations of the Grand River is expected to generate \$65 million for the community over the next 20 years. Additionally, Samsung's agreement with Haldimand County will contribute over \$15 million to the Haldimand County Community Vibrancy fund over the next 20 years.

Economic Benefits to Ontario

Ontario's clean energy initiatives have attracted billions of dollars in investments, and helped create thousands of clean energy jobs across the province, benefiting many communities. According to a report from an expert third-party, the renewables sector is forecast to contribute nearly \$5.4 billion to Ontario's gross domestic product and create 56,500 jobs between 2017 and 2021. Many companies that participated in Ontario's expansion of renewable energy are now poised to export their expertise and products to foreign markets. This could contribute as much as \$1 billion to Ontario's GDP and could add as many as 10,700 jobs between 2017 and 2021.

Net Metering

As of December 31, 2016, there were 983 net-metered facilities on-line with a total installed capacity of about 12 MW.

- Approximately 85% of these net-metered generation facilities are solar PV, and approximately 13% are wind. There are only 3 biomass and 2 hydroelectric net metering projects.

The Ministry of Energy has recently taken steps to enhance Ontario's net metering framework. An amended net metering regulation (O. Reg. 541/05: Net Metering) came into force July 1, 2017. The updated regulation clarifies the 12 month carryover period for bill credits, removes the 500 kW project capacity size limit and allows for pairing of energy storage with renewable energy systems.

The Ministry is examining additional potential net metering updates related to third-party ownership of net-metered generation and inclusion of virtual net metering models in Ontario's net metering framework. The Ministry has engaged stakeholders and Indigenous groups on these potential updates and has incorporated their feedback as policy options are considered.

Q2. With the winding down of FIT and microFIT programs, what opportunities will there be for municipalities to participate in renewable energy projects?

Recent enhancements to Ontario's net metering framework provide increased opportunities for all Ontarians to participate in renewable energy initiatives. This includes municipalities looking

at how renewable generation can be used to offset municipal electricity loads and to help meet their own energy and climate change goals.

An amended net metering regulation (O. Reg. 541/05: Net Metering) came into force July 1, 2017. The updated regulation removes the previous 500 kW project size limit and clarifies the ability to pair energy storage technologies with renewable energy systems.

The removal of the 500 kW size limit on net-metered generation will allow for right-sizing of renewable generation systems for larger loads, such as municipal, institutional and industrial customers. The ability to use energy storage with net-metered renewable generation projects will allow different types of customers to better manage their electricity costs through a net metering arrangement.

Further to commitments made in the 2017 Long Term Energy Plan (LTEP), the Ministry of Energy is currently working on additional enhancements to Ontario's net metering framework which would enable third-party ownership and virtual net metering demonstration projects.

Third-party ownership would allow entities other than the customer to own and operate the renewable generation facility. This will reduce barriers such as the customer not having the up-front capital to invest in the project.

Virtual net metering demonstration projects will also be of potential interest to municipalities. Virtual net metering arrangements have the potential to address barriers to customers participating in renewable energy without the need to host a generation system. Because generation would not need to be located behind the customer's meter, a customer could participate in net metering without the need to host a generation system. This means that net metering could be opened up to those living in condos or apartments and anyone else that could not physically host renewable generation. Virtual net metering is also a potential platform for innovation that could facilitate better grid integration capabilities or net-zero buildings and communities.

In December 2017, the Ministry of Energy posted three regulatory proposals for public comment that would:

- [Enable third-party ownership of net-metered generation facilities and virtual net metering demonstration projects;](#)
- [Introduce new and enhanced consumer protections that would support the introduction of third-party ownership arrangements;](#) and
- [Ensure that prescribed types of renewable energy generation facilities are sited appropriately.](#)

The Ministry of Energy is now considering feedback received on these proposals. We are aiming to have final regulations in force in 2018.

As directed in the 2017 LTEP, the Independent Electricity System Operator (IESO) is developing a funding program for innovative renewable distributed generation projects, including virtual net metering demonstration projects. These projects will be used to inform future government policy and regulation on net metering and grid modernization.

The IESO will be delivering their LTEP Implementation Plan to the Minister of Energy by January 31, 2018. The Implementation Plan will include proposed timelines for program development and consultation. We encourage all interested parties to watch for these consultation opportunities in order to participate and help shape the scope of the program.

Q3. Electricity prices keep rising because of these sweetheart deals given to green energy companies – why do we keep awarding contracts at such high prices? (Answer should reflect lower wind and solar costs)

= The electricity system is planned to ensure there is enough power to meet peak demand. Maintaining a predictable, reliable electricity system requires a robust mix of generation resources to be available to be called on when the electricity is needed.

Commented [CRED1]: Source: 2017 Estimates Tough QAs.

The diversity of the current supply mix also insulates Ontario against sudden changes in cost or availability of any one source, and is one of the greatest strengths of Ontario's electricity system.

Each of the supply mix elements, including hydroelectric, nuclear, natural gas, wind, solar, bioenergy, conservation and clean imports, plays a unique role in delivering a reliable and cost-effective source of energy to Ontarians.

Ontario's renewable energy resources provide us with clean, emissions-free electricity that has helped eliminate coal fired generation from our supply mix and will help the province meet its climate change goals.

Additionally, the growth of Ontario's clean tech and renewable energy sectors has attracted billions of dollars in investment to Ontario and led to the creation of thousands of new jobs.

Renewable energy procurements under the Feed-in Tariff (FIT) and microFIT programs concluded in 2017. Since 2009, prices paid for new electricity from FIT and microFIT projects were reduced between 50 and 75 per cent, reflecting the decreasing costs of equipment and ensuring value to ratepayers.

The introduction of the Large Renewable Procurement (LRP) process in 2014 resulted in strong competition between developers of large renewable projects, drove down prices and secured clean, reliable generation. This significantly reduced the costs of wind and solar energy, saving money for electricity ratepayers.

As a result of annual price reviews, revised procurement totals and the introduction of competitive procurement for large renewable energy projects, the FIT, microFIT and LRP initiatives are expected to cost at least \$3 billion less than what was forecast in the 2013 LTEP.

Given our strong supply position, Ontario suspended the second round of the LRP process and the Energy-from-Waste Standard Offer Program, halting the procurement of over 1,000 megawatts (MW) of solar, wind, hydroelectric, bioenergy and energy from waste projects. This decision is expected to save up to \$3.8 billion in electricity system costs relative to the 2013 Long-Term Energy Plan (LTEP) forecast.

Finally, renegotiating the Green Energy Investment Agreement in 2013, reduced contract costs by another \$3.7 billion.

Ontario remains committed to investing in a clean, modern and reliable electricity system that reduces greenhouse gas (GHG) emissions and provides cleaner air for this and future generations of Ontarians.

Regional/Municipal Energy Planning

Q4. What is Ontario doing to support regional electricity planning?

Changes introduced by the Ontario Energy Board (OEB) in 2013 have enhanced the planning process by ensuring that transmitters, distributors and the Independent Electricity System Operator (IESO) work closely to identify solutions for regional electricity needs and by encouraging greater municipal involvement and public participation.

Since 2013, the IESO and utilities have engaged communities in a formalized regional planning process. The electricity needs of all 21 of Ontario's planning regions have now been evaluated, completing the first full cycle of regional planning assessments across the province and we now have an opportunity to look at the challenges and opportunities. Through the LTEP, we have asked the IESO to review the process. For example, the review will look at ways to better integrate regional planning with community energy planning and distribution and bulk system planning and at barriers to evaluating and implementing non-wires solutions.

Ontario's Municipal Energy Plan (MEP) program and the IESO's Aboriginal Community Energy Plan (ACEP) program also support the efforts of municipalities and Indigenous communities to assess their energy use and needs, consider the impact of future growth, and foster local economic development through the development of community energy plans.

Q5. What are the Municipal Energy Plan (MEP) program and the Aboriginal Community Energy Plan (ACEP) program?

The Municipal Energy Plan (MEP) and Aboriginal Community Energy Plan (ACEP) programs complement the regional electricity planning process by focusing on unique community needs and goals. The MEP program is facilitated by the Ministry of Energy, while the ACEP program is facilitated by the Independent Electricity System Operator (IESO).

Each program has two streams of funding. Stream 1 provides successful applicants with up to a maximum of \$90,000 to develop an energy plan. Stream 2 provides successful applicants with up to a maximum of \$25,000 to update or enhance an existing energy plan.

These programs help municipalities and Indigenous communities understand their local energy needs, identify energy conservation and green energy opportunities, support economic development and local business opportunities, and develop plans to meet their goals.

The programs support municipalities and Indigenous communities to develop plans that focus on opportunities for greater energy efficiency, reducing greenhouse gas emissions and clean energy projects.

Q6. How do municipal energy plans fit into regional energy planning and the Long-Term Energy Plan?

Regional electricity plans promote the principle of Conservation First while also considering other cost-effective solutions such as supply, transmission and distribution investments.

Outreach with local municipalities and Indigenous peoples is the start of engagement for regional plans. In many areas of the province, Local Advisory Committees have been established to help provide advice and recommendations on regional electricity planning.

An ongoing dialogue serves to build understanding of how regional planning happens and provides opportunities for local input, laying the foundation for successful implementation.

Municipalities are also being encouraged to develop their own community-level energy plans to identify opportunities to conserve, improve energy efficiency and reduce greenhouse gas emissions, and to identify infrastructure priorities. The Municipal Energy Plan supports these efforts.

LDC Consolidation

Q7. What is your position on Local Distribution Company (LDC) consolidation?

We are always looking for ways to help minimize price impacts on Ontario families and businesses. This includes the possibility of finding efficiencies through the voluntary consolidation of electrical utilities.

Our government has been clear that we will not be forcing the consolidation of Local Distribution Companies (LDCs), but will work to create an environment for voluntary consolidation.

Q8. How is the government encouraging voluntary consolidation?

Our government has been clear that we will not be forcing the consolidation of Local Distribution Companies (LDC), but will work to create incentives for voluntary consolidation.

As announced in the 2015 Ontario Budget, the Province is providing time-limited relief on taxes pertaining to transfers of electricity assets for all municipal electricity utilities (MEUs), including transfers to the private sector. This includes:

- Reducing the transfer tax rate from 33 to 22 per cent;
- Exempting MEUs with fewer than 30,000 customers from the transfer tax; and
- Exempting capital gains arising under the PILs Deemed Disposition Rules.

These measures are for the period beginning January 1, 2016 and ending December 31, 2018.

Q9. Is Hydro One planning on acquiring smaller LDCs?

Hydro One has indicated publicly that it continually stays in dialogue with Local Distribution Companies (LDCs) across the province

As Hydro One is now a publicly-traded company, any discussions regarding purchases with Hydro One would be a matter of commercial negotiation between Hydro One and that utility.

Q10. My municipality's LDC is in negotiations to be sold to Hydro One – how do we stop this from happening?

Discussions between LDCs interested in selling would be a matter of commercial negotiations between the owners and the purchaser. Questions would best be addressed to the municipal shareholders or the LDCs.

Sale of Hydro One

Q11. Will the government consider reversing the sale of Hydro One?

The Province committed to the largest investment in public infrastructure in the Province's history through Moving Ontario Forward, to which it has committed the net proceeds from broadening the ownership of Hydro One.

With the completion of the final transaction in May 2017, the Province has exceeded its objective to raise \$9 billion in gross proceeds and other revenue benefits through broadening the ownership of Hydro One.

Net proceeds from the May 2017 Hydro One share offering will be dedicated to the Trillium Trust, as was the case with the previous two offerings, to help fund the much needed infrastructure projects such as transit and transportation.

Maximizing the value of provincial assets is part of our plan to create jobs, grow our economy and help people in their everyday lives.

Q12. Won't rates rise as a result of your sale of Hydro One?

Hydro One does not set its own electricity rates. Rates continue to be set by the independent Ontario Energy Board (OEB).

The OEB is an independent regulator with a mandate to protect the interests of Ontario's electricity consumers. Applications from electricity companies like Hydro One are reviewed by the OEB and the OEB makes the final decision.

ROMA 2018 – Questions and Answers

Ministry of Energy

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It is a routine process for electricity distributors, including Hydro One, to apply to the Ontario Energy Board (OEB) requesting changes to their distribution rates.

The OEB is an independent regulator with a mandate to protect the interests of Ontario's electricity consumers. Applications from electricity companies like Hydro One are reviewed by the OEB and the OEB makes the final decision.

If pressed on the OFHP commitment to hold bill increases to inflation for four years:

The inflationary increases will be calculated based on a "proxy" consumer that uses 750kWh per month – the average household consumption used by the OEB – and is charged Toronto Hydro distribution rates and Hydro One transmission rates. The use of a Toronto Hydro residential customer for the proxy consumer was chosen to align with previous forecasts, such as the 2010 Long-Term Energy Plan, 2013 Long-Term Energy Plan and the 2016 Ontario Planning Outlook.

The OEB will adjust Regulated Price Plan (RPP) prices in such a manner that the total bill for the proxy consumer will increase by the rate of inflation. This calculation will account for any changes to Toronto Hydro distribution rates and Hydro One transmission rates.

Actual impacts for Hydro One distribution customers could be above or below the level determined for the proxy consumer depending on consumption and OEB's approved distribution rates for Hydro One.

Q13. Why are you allowing Hydro One to ask for an increase in distribution rates?

It is a routine process for electricity distributors, including Hydro One, to apply to the Ontario Energy Board (OEB) requesting changes to their distribution rates.

The OEB is an independent regulator with a mandate to protect the interests of Ontario's electricity consumers. Applications from electricity companies like Hydro One are reviewed by the OEB and the OEB makes the final decision.

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Actual impacts for Hydro One distribution customers could be above or below the level determined for the proxy consumer depending on consumption and OEB's approved distribution rates for Hydro One.

Q14. Have any Hydro One shares been sold to First Nations or Métis?

Commented [AL2]: By way of explanation, DMO requested this content related to FHP/H1 rate application under Q12, but as Q13 is the question that asks about the rate application we have inserted the content here. Theoretically this same content could be used for Q12 if desired.

Commented [AL3]: By way of explanation, DMO requested this content related to FHP/H1 rate application under Q12, but as Q13 is the question that asks about the rate application we have inserted the content here. Theoretically this same content could be used for Q12 if desired.

On January 2, 2018 the Province announced its completion of the sale of 2.4% of the outstanding common shares of Hydro One Limited to OFN Power Holdings LP, a limited partnership wholly-owned by Ontario First Nations Sovereign Wealth LP, for the benefit of 129 First Nations communities in Ontario.

Commented [SMc4]: Updated per Jan 2 2018 news release.

The Province sold shares at a purchase price of \$18 per share for a total purchase price of \$259,038,216. This transaction fulfills the Province's commitment in its agreement in principle with the Chiefs-in-Assembly on behalf of First Nations, which was previously announced in July 2016.

Conservation

Q15. What options/programs are available to municipalities to help reduce their energy consumption?

Ontario has a suite of conservation and energy efficiency programs in place that help homes and businesses (including municipalities) manage their energy usage and bills, through services and financial incentives for the installation of energy saving measures, or information to promote the wise use of energy.

Programs for businesses are available through the Independent Electricity System Operator (IESO), local distribution companies (LDCs) and natural gas utilities.

Examples of electricity conservation programs that municipalities can benefit from are listed below:

Electricity:

- The Save on Energy Retrofit Program provides incentives of as much as 50 per cent of project costs for updating old or inefficient equipment, including lighting, motors, unitary AC or packaged rooftop units, variable frequency drives, and compressed air systems. Advanced funding is available for assisted and social housing buildings.
- Save on Energy Small Business Lighting provides incentives of up to \$2,000 for new energy efficient lighting.
- Save on Energy Small Business Refrigeration Incentive program provides up to \$2,500 in refrigeration upgrades, which can increase reliability, cut costs and reduce food spoilage.
- Save on Energy Audit Funding of up to 50% of the cost of an energy audit to identify opportunities for energy efficiency upgrades and eligible incentives.
- Save on Energy Process and Systems provides up to \$50,000 for engineering studies and up to 70% of capital costs for energy efficiency upgrades.

- Save on Energy Energy Manager program is available through your local hydro company or through the IESO. Energy managers are trained to find energy savings, identify smart energy investments, secure financial incentives, and unleash competitive advantage.
- IESO's Save on Energy Training and Support initiatives help provide access to the most up-to-date training, such as in building commissioning, certified measurement and verification, and how to be an energy manager.

Natural Gas:

- Under their fixed incentive offers, Enbridge and Union provide financial incentives for a set list of natural gas reducing measures (e.g. furnaces, water heaters, ovens etc.), typically with pre-determined incentive amounts and estimated savings.
- Under their custom incentive offers, Enbridge and Union provide financial incentives for customized natural gas reduction projects.
- The Union Gas *RunSmart* and Enbridge Gas *RunItRight* programs help to enhance and optimize existing building systems and operations to find energy efficiencies.

Program offering through the new Green Ontario Fund will also help Ontario businesses and industries increase their use of low-carbon technologies while also reducing costs.

Q16. Can you give us some examples of how municipalities are saving money through conservation?

The City of Brampton received about \$30,000 in incentives through the saveONenergy Retrofit Program to install an energy efficient lighting system, including over 1,000 fluorescent fixtures, over 200 CFLs and over 240 LED fixtures, at the Brampton Civic Centre. The City's Building and Property Management Department worked closely with its local electricity utility to develop the project incentive application. Total cost of the project (including incentives) was \$110,000 and the project is expected to generate \$22,000 in annual electricity savings.

By participating in Save on Energy programs, the City of Stratford Wastewater Treatment Plant modernized its aeration blower system, reducing the total treatment and collection costs of wastewater by more than 20%. The project helped generate over \$60,000 in annual electricity savings.

The City of Temiskaming Shores began developing its Municipal Energy Plan (MEP) in 2015. Thanks to its MEP, the city has found ways to be more energy-efficient. For example, it installed LED lighting in 955 street lights, converted to smaller pumps and motors in water and wastewater treatment facilities, and installed more efficient heating systems. The energy efficiency changes the city made have resulted in 20 per cent reductions in the utility bills for some projects.

Northern Ontario

Q17. Some northern Ontario municipalities, especially in the northwest, are concerned about the reliability of the electricity supply in the region. Are you confident the region will have enough power in the coming years?

Our priority is to ensure there continues to be a stable, reliable and cost-effective supply of electricity.

Electricity needs in the Northwest region are being driven by mining and forestry operations as well as growth in the communities that support them. The Independent Electricity System Operator (IESO) has evaluated these needs through regional plans.

We have undertaken a number of Northwestern projects such as the Thunder Bay Generating Station and Atikokan Generating Station conversions. Development work is underway for an enhanced East–West Tie and the Northwest Bulk transmission line, and the connection of remote First Nation communities to the transmission grid.

Q18. Many remote First Nation communities in northwestern Ontario still rely on diesel generators for power. Does the government plan on connecting them to the transmission grid?

The government recognizes that there are unique challenges associated with supplying remote communities with clean and affordable electricity. The current practice of diesel generation does not provide an adequate and reliable supply for these communities and leads to environmental impacts including the release of significant greenhouse gas emissions.

The Independent Electricity System Operator's (IESO) analysis shows up to 21 of 25 remote First Nation communities in northwestern Ontario are economical to connect to the provincial electricity grid, reducing the reliance on dirty diesel generation. Grid access will enable growth and lower costs over the long run.

Wataynikaneyap Power LP (Watay Power) is pursuing a transmission project to connect the majority of these remote First Nation communities.

Watay Power is an unprecedented partnership between a consortium of 22 First Nation communities working with a transmission partner, FortisOntario. Most of Watay's First Nation partners are the remote communities themselves.

Responsibility for electricity service in remote First Nation communities is shared between the Province and the federal government. A fair cost sharing agreement is critical to connecting remote First Nation communities to the provincial grid. We have been having productive discussions with the federal government and Watay Power and one recent outcome of these talks was the announcement of up to \$60M from Canada to support the grid connection of Pikangikum First Nation.

For the four First Nation communities that are not economic to connect to the grid, the government is supporting these communities to explore innovative solutions such as renewable microgrids to reduce their dependency on diesel fuel. The Climate Change Action Plan committed to supporting renewable generation and microgrids to reduce diesel dependency, and the Ministry is working on fulfilling this commitment with a focus on supporting the communities where grid connection is not viable.

Q19. What is the government doing to ensure mining projects in the North of Dryden area will have access to a reliable source of power?

Our priority is to ensure there continues to be a stable, reliable and cost-effective supply of electricity.

Electricity needs in the Northwest region are being driven by mining and forestry operations as well as growth in the communities that support them. The Independent Electricity System Operator (IESO) is conducting a review of these needs on the bulk system and through regional plans.

The North of Dryden Integrated Regional Resource Plan lays out options to meet demand for electricity in the region over the near-, medium-, and long-term.

The Long-Term Energy Plan highlighted several major transmission projects in the Northwest that are under development to ensure reliable and adequate electricity supply and enable growth in the region. These include the East-West Tie, the Northwest Bulk and the connection of remote First Nation communities including enabling infrastructure such as a new line from the Ignace/Dryden area to Pickle Lake.

The government continues to monitor progress to develop these priority lines and is taking action when appropriate to ensure they move forward to construction.

Q20. What steps is the Ministry taking to promote the development of the Ring of Fire? How does the status of the mining sector affect development? Will you connect the region to the transmission system?

Our government is committed to smart, sustainable, and collaborative development in the Ring of Fire.

There is the potential for cost savings and synergies if transmission infrastructure is shared to achieve the connection of remote First Nation communities in the Ring of Fire region and the development of mines.

The opportunities provided by the Ring of Fire also have the potential to become a significant economic driver for northern Ontario, and the Province continues to be committed to successful development of the region.

Ontario has also made progress on road infrastructure to the Ring of Fire. In August 2017, Ontario announced that it would work with Webequie, Marten Falls and Nibinamik First Nations

to plan and construct a year-round access road into the proposed mining development site being pursued by Noront Resources Ltd. As part of this project, the province is also working with First Nations to build all-season access roads to their communities. The Province is also supporting Marten Falls First Nation to plan and construct an access road connecting the community to the existing provincial highway network at Aroland/Nakina. As a next phase, Ontario will continue to support Marten Falls to undertake further technical and environmental studies that could inform planning and development of a north-south access road tied to the development of, and business case for, chromite mining in the Ring of Fire. As these projects are developed, there may be future opportunities to coordinate road infrastructure with energy infrastructure.

Q21. Municipalities in Northern Ontario have complained about the lack of fairness when it comes to gasoline prices. Will the government listen to municipalities and start regulating the price of gasoline?

In November 2016, the Minister of Energy asked the Ontario Energy Board (OEB) to review and report on the province's retail transportation fuels market, including gasoline and diesel, to provide more transparency for consumers about how prices are set.

On November 9, 2017, one year later, the OEB issued the final prepared by their consultant, The Kent Group. The report titled, Understanding Retail Transportation Fuel Pricing in Ontario, is posted on the Ontario Energy Board website at: <http://www.oeb.ca>.

Gasoline pump prices are affected by crude oil prices, wholesale gasoline prices and competition in the local retail gasoline market.

The report concluded that in each market reviewed, fuel price levels, their volatility and the differences that exist between markets are reasonable and representative of the behaviour of a competitive market. The analysis also found that regulation can affect fuel prices in a way that does not benefit consumers. In some provinces, regulations have resulted in prices that were higher than would likely be experienced in an unregulated setting.

The government intends to use this information to inform decision making going forward.

Ensuring businesses and families have reliable information on fuel prices is part of the government's plan to create jobs, grow the economy and help people in their everyday lives.

The Ministry of Energy monitors gasoline and diesel supply and pricing on an ongoing basis, and makes this information publicly available in the Ontario Energy Report on the Ministry website.

The federal government has responsibility for ensuring competition in gasoline markets, through the federal Competition Bureau.

Non-Utility Generators (NUGs)

Q22. What is the current status of Non-Utility Generators (NUG) in Ontario?

Legacy thermal NUGs typically operate as baseload electricity resources and contribute to surplus baseload generation (SBG). Given the evolution of Ontario's electricity system, the government recognized an opportunity to increase system value, reduce costs for Ontario electricity consumers and lower greenhouse gas (GHG) emissions in the province, if legacy thermal NUGs were to operate in a manner that is better aligned with the power system's needs, for the remainder of their contract terms.

On December 16, 2016, we directed the Independent Electricity System Operator (IESO) to proceed with negotiating contracts with legacy thermal OEFC NUGs that would provide cost savings to Ontario electricity consumers. We have instructed IESO not to extend the terms of any of these contracts.

IESO has advised the Ministry that it has executed restructured NUG contracts with five legacy NUG facilities.

In the future, Ontario intends to procure generating capacity through a competitive, technology-neutral capacity auction. We welcome the involvement of NUGs in this initiative.

Q23. Why won't you support NUGs that local industries rely on?

The government is firmly focussed on enhancing the efficiency of our electricity system, reducing costs, and continuing to deliver broad-based rate relief for Ontario consumers.

Achieving value in energy contracts directly impacts the price we pay for electricity and the economic competitiveness of all areas of the province.

Given the evolution of Ontario's electricity system, the government recognized an opportunity to reduce costs and lower greenhouse gas (GHG) emissions if legacy thermal NUGs currently under contract with the OEFC were to operate in a manner that was better aligned with the power system's needs for the remainder of their contract terms.

Any new procurement must demonstrate that it can provide value to the electricity system and to all electricity consumers in Ontario, including households, small businesses, farms, and industrial consumers.

Going forward, Ontario electricity consumers can expect to benefit from the Independent Electricity System Operator's (IESO) Market Renewal initiative, including the transition to procuring generating capacity through a technology-neutral capacity auction in which all resource types compete to meet Ontario's electricity needs. We welcome the involvement of NUGs in this initiative.

First Nation and Métis

Q24. What is the government doing to support Indigenous participation in Ontario's energy sector? What progress has been made?

Ontario is committed to supporting Indigenous capacity and leadership in our energy sector.

The Ministry of Energy undertook an extensive engagement process from October 2016 to early 2017 to inform the updating of Ontario's Long Term Energy Plan (LTEP).

The Ministry held 17 Indigenous engagement sessions across the province, which included almost 200 attendees from nearly 100 Indigenous communities and organizations.

The feedback received from First Nation and Métis individuals, communities and organizations is critical to informing the policies and programs that will ensure the continued involvement of Indigenous communities in the energy sector, including in transmission, conservation, and small-scale distributed generation.

Since 2009, there has been a strong emphasis on Indigenous participation in the renewable energy sector. As a result of incentives built into renewable energy procurements including the Feed-in Tariff (FIT) Program and Large Renewable Procurement (LRP), First Nation and Métis communities and groups are leading or partnering on more than 600 different wind, solar and hydroelectric projects. These projects have a contracted capacity of over 2,000 MW of clean energy – enough to power about 700,000 homes each year.

There has also been tremendous leadership from Indigenous communities in leading or establishing partnerships on major transmission line projects such as the East-West Tie and the remote community connection project.

While renewable energy opportunities have changed due to Ontario's strong energy supply position, the Ministry of Energy remains committed to ensuring that opportunities for First Nation and Métis communities in the energy sector continue.

Natural Gas Rates/Expansion

Q25. Several municipalities want to bring natural gas to their communities. Will the province help with the costs?

Ontario is facilitating the expansion of natural gas to communities that do not currently have service, including those in rural and northern Ontario and First Nations communities.

The Natural Gas Grant Program is a \$100 million initiative, part of the province's Moving Ontario Forward plan and will be led by the Ministry of Infrastructure (MOI), with support from ENERGY and OMAFRA. The Grant Program will help facilitate the expansion of natural gas service into areas of the province which currently do not have access to natural gas.

Ensuring affordable sources of energy are available to more rural and northern communities is a key part of Ontario's energy plan.

Q26. When can my First Nation or municipality apply to the grant program?

On January 30, 2017, the government announced the new Grant Program at the 2017 ROMA conference. First Nations and municipalities are to partner with utilities, who will file an application to the program. The Ministry of Infrastructure accepted applications from utilities until July 31, 2017.

Projects underwent an evidence-based assessment process involving multiple provincial ministries/agencies including Infrastructure Ontario, Ministry of Infrastructure, Ministry of Agriculture, Food and Rural Affairs, Ministry of Energy, Ministry of the Environment and Climate Change, Ministry of Indigenous Relations and Reconciliation and Ministry of Northern Development and Mines.

Results of the new Grant Program were shared with applicants in early December 2017. Distributors and suppliers are responsible for establishing project timelines with all projects targeting completion by March 31, 2021.

The government will continue to support expanded access to natural gas, giving consumers greater choice and aiding in the economic development of their community.

Q27. What is the Green Investment Fund (GIF) residential audit and retrofit program?

Ontario has invested \$100 million from the Ontario Green Investment Fund to help homeowners reduce energy bills while cutting greenhouse gas emissions.

The investment is enhancing the existing home energy audits and retrofit programs offered by Enbridge Gas Distribution and Union Gas.

This investment will help about 37,000 homeowners across the province conduct audits to identify energy-saving opportunities and then complete retrofits, such as replacing furnaces and water heaters, and upgrading insulation. These home energy efficiency retrofits will save consumers money on their energy bills.

Homeowners who heat their homes with natural gas, oil, propane or wood will also be eligible for rebates towards energy audits and retrofits.

The \$100 million investment is expected to result in approximately 1.6 megatonnes of lifetime greenhouse gas (GHG) reductions, equivalent to removing approximately 25,000 cars from Ontario's roads for 15 years.

Q28. What about homeowner who aren't Enbridge or Union Gas customers? Does that mean they can't participate in the GIF program?

The program is available to all eligible single family residential homes in Ontario, subject to the program terms and conditions. This funding is meant to reduce Ontario's greenhouse gas (GHG) emissions from the residential sector and contribute towards the province's GHG emission reduction targets.

The program is offered province-wide (i.e. outside of Union and Enbridge service territories) and is available to homeowners who heat their homes with other fuels, such as oil, wood and propane.

Transmission Expansion

Q29. What is being done to ensure that Ontario's transmission system is properly maintained, planned and developed?

Transmission is the backbone of the electricity system. Maintaining system reliability is a top electricity priority.

Since 2003, over \$18 billion has been invested to enhance and renew Hydro One's systems, including upgrades to over 17,000 kilometres of power lines (including both transmission and distribution lines).

The Independent Electricity System Operator (IESO) estimates that significant transmission projects completed since 2003 have increased the transmission capacity by about 10,000 megawatts (MW).

The 2017 Long-Term Energy Plan (LTEP) indicates no need for any major expansion of Ontario's transmission system beyond the projects already planned or under development. Highlighted projects included the East-West Tie, the Northwest Bulk Transmission line, Hawthorne to Merivale Upgrades, GTA West Bulk System Reinforcement, Clarington Transformer Station and the connection of remote northwestern First Nation communities to the electricity grid.

Changes introduced by the Ontario Energy Board (OEB) in 2013 have enhanced the regional planning process by ensuring that transmitters, distributors and the Independent Electricity System Operator (IESO) work closely to identify solutions for regional electricity needs and by encouraging greater municipal involvement and public participation.

All regions of the province can expect timely local transmission enhancements as needs emerge. Since 2013, the IESO and utilities have engaged communities in a formalized regional planning process. Over the past three years, The electricity needs of all 21 of Ontario's planning regions have now been evaluated, completing the first full cycle of regional planning assessments across the province and we now have an opportunity to look at the challenges and opportunities. Through the LTEP, we have asked the IESO to review the process. For example, the review will look at how to ways to better integrate regional planning with community energy planning and distribution and bulk system planning and at barriers to evaluating and implementing non-wires solutions.

Q30. Some municipalities have complained that a lack of electricity supply and limitations on the transmission and distribution grid are affecting their ability to attract businesses. What are you doing to help these communities grow?

Maintaining system reliability is a top electricity priority.

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Q31. Inadequate electricity capacity is causing greenhouse businesses in the Essex County area of Ontario to leave. What is the government doing to stop more businesses in the region from leaving?

We recognize the potential for continued growth in the Leamington area and are moving forward to expand the local grid with a new transmission line and a new transformer station.

The project has received all the necessary approvals and construction has begun. Hydro One has stated that June 2018 is the target for this transmission expansion to come into service.

Thanks to extensive consultation with local partners, the project is designed to meet the growing needs of the Leamington area, including the greenhouse industry. This includes the flexibility to increase capacity in the future if necessary.

The successful project follows extensive engagement by the Ministry of Energy and Hydro One with greenhouse grower industry associations, representatives of Leamington and the surrounding municipalities and local distribution companies.

We look forward to further engagement with our local partners as we work to ensure the energy needs of the Leamington area continue to be met.

Nuclear Waste

Q32. What is the status of OPG's deep geological repository (DGR) proposal to store low and intermediate-level waste at the Bruce Power nuclear site in Kincardine?

The federal government is reviewing OPG's proposal for a DGR for low and intermediate-level nuclear waste within the Bruce site.

Since February 18, 2016, the federal Minister of Environment has asked OPG to conduct and submit a number of additional studies on the proposed DGR before a decision can be made. The most recent request was made on August 21, 2017 which the federal Minister requested additional information on the potential cumulative effects of the DGR on Saugeen Ojibway Nation's (SON) cultural heritage as well as potential effects on SON's spiritual and cultural connection to the land. OPG is currently drafting their response.

Following OPG's submission, the Canadian Environmental Assessment Agency will complete its draft report for public and Indigenous comment and will submit the final version to the federal Minister of Environment and Climate Change as part of a decision package.

We are pleased with the federal government's collaborative approach to decision-making and providing ample opportunity for input from the public and Indigenous communities. We continue to encourage OPG to continue its discussions with local Indigenous communities and provide its responses to any information requests in a timely and cooperative manner.

Q33. What can you tell us about the Nuclear Waste Management Organization's (NWMO) DGR site selection for high-level waste?

The NWMO is an industry-led organization responsible for the safe handling of Canada's used nuclear fuel. NWMO is mandated through the federal *Nuclear Fuel Waste Act*.

The NWMO is currently in the process of selecting an informed and willing host community to store nuclear fuel waste in a DGR located approximately 500 metres below the surface using multiple engineered barriers.

On December 6, 2017, the NWMO announced that it had narrowed its site selection from seven Ontario communities to five (i.e., Ignace, Manitouwadge, Horneypayne, South Bruce and Huron-Kinloss). These five Ontario communities are still being considered for siting and all have completed the first phase of preliminary assessment and will move on to the next phase in the process.

The NWMO initiated geological testing (e.g., borehole drilling) near Ignace on November 6, 2017. Additional borehole drilling is expected to commence in early 2018.

The NWMO anticipates that the final disposal site would be selected by 2023 and in service sometime between 2040 and 2045.

Commented [DT5]: Initial messaging mentioned October 30, 2017 but has been updated as per NWMO's new release - <https://www.nwmo.ca/en/More-information/News-and-Activities/2017/10/30/07/13/Next-Step-of-Geological-Studies-Underway>

Cap and Trade/Climate Change

Q34. What are the estimated impacts of cap and trade on electricity consumers?

The elimination of coal-fired generation represents a 30 Mt reduction in greenhouse gas emissions since 2003. Ontario's electricity sector is now over 90% emissions free. As a result of these efforts, Ontario's electricity system is in a strong position as we continue to implement the province's cap and trade program.

Natural gas-fired electricity generators are expected to pass on the cost of carbon through increased offers into the wholesale electricity market. Non-emitting electricity generation, such as wind and solar power, is not subject to a carbon price and therefore will have no impact on electricity bills.

Ontario's Fair Hydro Plan provides new measures that have lowered electricity bills by 25 per cent on average for residential consumers. As many as half a million small businesses and farms are also benefitting. The plan includes the 8 per cent rebate introduced in January 2017 and builds on previously announced initiatives to deliver broad-based rate relief on all electricity bills.

As part of Ontario's Fair Hydro Plan, the government is shifting cost recovery for OESP and for the majority of RRRP from electricity bills to provincial revenues. This action will lower regulatory charges for consumers of all sizes by approximately \$3/MWh and is expected to offset the price increase resulting from cap and trade for an average large industrial electricity consumer over the first compliance period of the program.

Ontario's Climate Change Action Plan outlines how cap and trade auction proceeds are to be used in the first cap and trade compliance period (2017-2020) to fund actions to reduce greenhouse gas (GHG) emissions, such as supporting businesses in shifting away from fossil fuels and investing in next generation clean technologies. This will create good jobs, generate opportunities for investment in Ontario, and help smooth the transition to a low-carbon economy.

Q35. What are the impacts of cap and trade for low volume natural gas/gasoline consumers?

Under the Climate Change legislation, natural gas distributors are required to comply with the cap and trade program.

Natural gas distributors will recover cap and trade costs from users connected to their systems. Since natural gas distributors are regulated entities, any charges associated with gas distributors purchasing emission credits on behalf of customers will need to be reviewed and approved by the Ontario Energy Board (OEB).

Cap and trade is expected to increase average residential bills by between \$68 to \$80 per year (before taxes). The exact costs will depend on how much natural gas a customer uses each month.

Gasoline retailers operate in a competitive market and are expected to reflect the costs associated with cap and trade in retail prices. As outlined in the 2016 Budget, cap and trade is estimated to add approximately 4.3 cents to the cost of a litre of gasoline.

Stray Voltage/Current

Q36. What is the government doing to address concerns about stray voltage?

The Ministry of Energy is aware of the concerns about stray voltage, specifically regarding ongoing concerns in rural Ontario about stray voltage affecting livestock.

At the request of the Minister of Energy in 2007, the Ontario Energy Board (OEB) did an extensive two-year consultation on stray voltage with stakeholders, including representatives of the Ontario farming community, the Dairy Farmers of Ontario and the Ontario Federation of Agriculture.

Based on these consultations, the OEB made several amendments to the province's Distribution System Code in 2009 specifically to address the issue of farm stray voltage.

Under the amended Distribution System Code, Ontario farmers affected by stray voltage are guaranteed the right to an investigation by the local distribution company (LDC). The Distribution System Code also requires LDCs to take appropriate corrective measures if the LDC is found to be the source of the stray voltage.

Hydro One - the primary distributor to farms in Ontario - continues to work in an effort to address the concerns of livestock owners. On March 22, 2016, Hydro One announced the formation of a Farm Rapid Response Team (FRRT) to help identify, assess, and mitigate on-farm electrical issues.

From September 2016 to September 2017, the FRRT tested 78 farms for stray voltage issues. Of those, four tested over the Distribution System Code limit for stray voltage. For these farms, Hydro One undertook system improvements and verified that corrective action had brought stray voltage in compliance with Distribution System Code limits. Of the 74 farms below the limit, Hydro One offered to install a Dairyland Isolator to address stray voltage at the customer's cost. Nine farms voluntarily installed these devices.

The FRRT is also actively engaged in the farming community to raise awareness of stray voltage. The FRRT has been attending various farming events since its inception to meet with ratepayers, provide information about stray voltage, advertise its role and services, and answer questions that customers may have.

Commented [CH(6)]: Any updates on this?

Commented [NA(7)]: The estimate is from a one-time study commissioned by MOECC. No updates. Auction prices in 2017 were all reasonably close to the reserve price so unlikely the 4.3 cents would differ materially from the initial estimate.

Commented [SE(8)]: As Adrian notes, the estimates are in line with the 2017 auction prices. However, as the price of allowances increase, there will be a corresponding increase in the C+T expense related to both natural gas and gasoline. These numbers are good for use at ROMA as they are the most current.