

Energy

2017 Long-Term Energy Plan

Draft Based on Draft Materials

Cabinet July 26, 2017	TB/MBC Summer 2017	LRC/Cabinet Summer 2017	Public Release Fall 2017 TBC
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This government's commitment	"Building on the processes and principles used in the 2010 and 2013 plans and the new legislation, work with partner agencies and energy sector agencies to consult with consumers and stakeholders, and engage with Indigenous communities to develop Ontario's next Long-Term Energy Plan (LTEP) to be released in 2017" Minister of Energy Mandate Letter, September 2016.
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SUMMARY OF PROPOSAL

The Ministry of Energy is seeking policy approval to finalize Ontario's next Long-Term Energy Plan (LTEP). The LTEP is the energy sector's roadmap and generally identifies the needs for investments over the shorter term, while broadly mapping out the direction of the energy sector over a 20 year timeframe.

1. At this time, the ministry is seeking Cabinet approval of policy initiatives in the 2017 LTEP
2. Policy objectives to develop an implementation directive to the Independent Electricity System Operator (IESO);
3. Policy objectives to develop an implementation directive to the Ontario Energy Board (OEB); and
4. A related amending directive to the OEB.

The ministry will return to Cabinet in August 2017 to seek approval of the modelling outlooks to be included in the 2017 LTEP.

The ministry will table the final LTEP and directives in September/October.

The ministry is also reporting back to Cabinet on several initiatives approved in the Climate Change Action Plan, including: Green Button implementation, social benchmarking portal, and energy efficiency standards for drinking water and waste water treatment plants.

Under the proposal, the ministry is seeking approval to prepare proposed legislative

Commented [MK(1)]: Energy please confirm whether these will be detailed in this submission or brought forward in September.

amendments that would enable the province-wide implementation of Green Button and the expansion of Ontario's Net Metering initiative.

Context

The province previously released two LTEPs, in 2010 and 2013. The 2017 LTEP differs from the previous two iterations in two key ways:

- Development of the 2017 LTEP followed a new process, updated through the *Energy Statute Law Amendment Act, 2016*.
 - The LTEP process in the *Electricity Act, 1998* identifies three tools for creating and implementing the LTEP: the LTEP document, implementation directives, and implementation plans. The 2017 LTEP sets out the government's policy goals and objectives, leaving the Independent Electricity System Operator (IESO) and Ontario Energy Board (OEB) flexibility to implement the plan.
- The 2017 LTEP broadens its focus to include the fuels sector, in addition to electricity.

The ministry undertook extensive stakeholder and partner engagement over the fall and winter of 2016/17 to inform the development of the LTEP, including 17 public and stakeholder sessions and 17 Indigenous engagement sessions.

What is the regulatory impact of this proposal? UNDER DEVELOPMENT The LTEP is being development as per the legislative process outlined in the *Electricity Act, 1998*. Further, as noted in the submission the ministry is proposing to develop a legislative and regulatory framework to mandate province-wide implementation of Green Button for electricity and natural gas distributors, and voluntary implementation for water utilities.. A regulation is also required under the *Electricity Act* to specify how often the government would release the LTEP. Finally, specific initiatives within the LTEP may require regulations (e.g. storage), but these are intended to remove barriers and not expected to create any additional regulatory burden.

Commented [MK(2)]: Energy please advise of any new regulations or increased regulatory burden associated with the proposals.

ENERGY Response:
ENERGY is proposing to amend the *Green Energy Act, 2009* and the *Ontario Energy Board Act, 1998* in Fall 2017 to enable the implementation of Green Button province-wide. A subsequent regulation would follow in early 2018.

What is the expected cost to government?

The majority of initiatives contained in the proposed LTEP are either anticipated to be funded from internal allocations or are already funded by the rate base, with two specific exceptions: the Smart Grid Fund and an International Energy Demonstration Fund pilot.

If approved, the ministry will seek TB/MBC approval in summer 2017 for:

- \$60 million over five years to renew the Smart Grid Fund
- \$10 million for a pilot International Energy Demonstration Fund

The ministry will report to TB/MBC through the 2018/19 PRRT process to identify any additional cost impacts associated with policy initiatives under the LTEP.

How will the changes be communicated?

- Engage in proactive media relations for the official launch day
- Execute a multi-platform strategic communications plan
- Leverage LTEP themes to create a strong narrative to inform longer term messaging

Commented [MK(3)]: CO comms to review.

CABINET OFFICE ANALYSIS

Introduction:

It is anticipated that there will be increased public interest in the 2017 LTEP over previous plans given the connection to Ontario's Climate Change Strategy and Climate Change Action Plan, and the profile of energy affordability concerns which led to the development of Ontario's Fair Hydro Plan (OFHP).

The 2017 LTEP will highlight various key policy initiatives which are intended to send clear signals to the public, partners, and sector participants regarding the province's direction for the energy sector. The Ministry is proposing the following chapters to organize the key initiatives:

- Ensuring Affordable and Accessible Energy
- Ensuring a Flexible Energy System
- Improving Value and Performance for Consumers
- Strengthening our Commitment to Energy Conservation & Efficiency
- Innovating to Meet the Future
- Responding to the Challenge of Climate Change
- Supporting Indigenous Capacity and Leadership
- Regional Priorities

Key Policy Initiatives

Some key initiatives represent ongoing work and others are new programs that the Ministry is proposing to announce through the LTEP document. Please refer to Appendix A for a summary of specific approvals sought in this submission.

A. Ensuring Affordable and Accessible Energy

The ministry plans to profile existing initiatives related to the OFHP, including the OEB's ongoing Gasoline price review and natural gas expansion to increase customer choice. The ministry also plans to enhance the OEB's consumer protection authority with regards to

consumers services by Unit Sub-Meter Providers (USMPs). In addition to the initiatives highlighted under this section, other chapters in the LTEP contain initiatives that are expected to lead to efficiencies and reduce overall system costs, which in turn will result in reduced costs for consumers (e.g., Market Renewal is captured in “Ensuring a Flexible Energy System” and OEB regulatory burden review is captured in “Improving Value and Performance for Consumers”).

B. Ensuring a Flexible Energy System

East West Tie

The East West Tie (EWT) is an approximately 400 km, 230 kV proposed transmission line paralleling an existing line between Wawa and Thunder Bay. The proponent, Nextbridge, was selected through a competitive process run by the OEB. Ontario declared the construction of the EWT a priority project in 2016. In May 2017, NextBridge informed the ministry that the estimated capital costs for the EWT had increased from its initial 2011 estimate of \$400 million to \$740 million. The Ministry is proposing to request an updated needs assessment from the IESO for this project following NextBridge making the cost public through their Leave to Construct Application before the Ontario Energy Board. The ministry also proposes to emphasize Ontario’s focus on making the electricity system more cost-effective in the LTEP document.

Northwest Bulk

The Northwest Bulk (NWB) Project, a reinforcement of the 230 kV system from Thunder Bay to Dryden, was named as a priority project in the 2013 LTEP and Hydro One was designated as the transmitter. The Ministry is proposing to outline a phased development approach, including the possibility of a phase from Dryden to the Manitoba border. The language in the LTEP would serve as a signal that Ontario is interested in inter-jurisdictional energy trade if future forecasts indicate the final phase is needed.

Bulk Planning

To address the need for increased transparency and better integrated planning of the bulk system (i.e., 230kV or 500kV transmission line infrastructure), the Ministry is proposing to direct the IESO to establish a new formal planning process that would include consultation with stakeholders and communities.

Profiled Ongoing Initiatives:

The ministry plans to highlight ongoing work related to the IESO’s Market Renewal program that is intended to modernize and redesign the province’s wholesale electricity markets, consider the benefits and impacts of the cap and trade program, and maximize the value of existing generation assets.

The IESO has begun a **Market Renewal initiative** to redesign the province’s wholesale electricity markets. Market Renewal is expected to deliver a more efficient, competitive and flexible electricity market to meet future system needs at lowest cost. 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.

The Cap and Trade Program will increase the competitiveness of non-emitting electricity generation and clean imports, as well as more efficient natural gas generation. Cap and trade also affects the price consumers pay for fossil fuels such as natural gas, gasoline, diesel and propane. Ontario successfully administered its first two quarterly cap and trade auctions on March 22, 2017 and June 6, 2017. All current allowances offered at both auctions were sold along with a portion of the offered future allowances, generating an estimated total of \$976 million in proceeds for the Province.

Commented [MK(4)]: MOECC to review.

Highlighting the desire to maximize the benefits from existing assets is prudent but will also emphasize the importance of continuing to benefit from the generating assets captured by the Clean Energy Costs (i.e., renewables and some natural gas) under the **Ontario Fair Hydro Plan Act, 2017 (OFHPA)**. Under the Global Adjustment (GA) refinancing mechanism outlined in the OFHPA, there is a requirement to benefit from these assets for a period beyond their existing contracts. The LTEP will also reaffirm the province's commitment to **nuclear refurbishment projects** with appropriate oversight and value for money caveats in place.

C. Improving Value and Performance for Consumers

Preserving Transmission Corridors

Through the Northwest Greater Toronto Area Integrated Regional Resource Plan (2015), the IESO identified the need for a new transmission line to supply portions of the Regions of Halton, Peel and York. Demand forecasts were developed by IESO based on population and employment forecasts included in Ontario's Growth Plan for the Greater Golden Horseshoe, 2017. The IESO has identified transmission as the most cost effective and technically feasible option and the Ministry is proposing to highlight the need to protect corridor lands for the new transmission line in the Northwest GTA in the LTEP.

Commented [HT5]: Is it just highlighting? Or will it identify that it will be reserved?

Response: Highlighting. Energy does not have the authority to protect corridor lands.

CO follow-up: There was discussion about Energy seeking the statutory authority to reserve corridor lands. Is that still on the table for this submission?

Commented [HT6]: Energy, do you have proposed mechanism for holding the lands? New powers? Working with partner ministries?

Response: Once a transmitter has been determined, the transmitter would file an EA Terms of Reference to initiate the EA process, including identifying a reference corridor. Once an EA is initiated, MMA can defend the lands from development through the OMB.

ENERGY has been actively engaging with MMA regarding the language proposed in the LTEP, as well as next steps once a transmitter starts EA work.

Commented [MK(7)]: MTO and MMA review.

Enhancing Reliability

The ministry is proposing to have the IESO and OEB review the standards for reliability and quality of service for transmitters and distributors and highlight the province's policy objectives for reliability and quality of service in the LTEP. To enhance reliability and customer satisfaction, the ministry is looking to its agencies to establish new reliability metrics and standards that provide insight into local reliability performance, establish customer service guidelines, increase transparency of performance reporting, and create accountability for improvement through incentives and/or penalties.

Competitive Transmitter Selection

The ministry is proposing to direct the IESO to develop a competitive selection or procurement process for the transmission sector, and to identify possible pilots for its use. The results of the pilots would then be used to refine the parameters of a more general selection or procurement process. The ministry indicates that greater competition could reduce costs in the development of new transmission, providing benefits to ratepayers.

Right-Sizing Assets

When transmitters and distributors replace aging equipment, they can increase efficiency by “right-sizing” the replacements (i.e., ensuring the new investments match current demand and requirements). This could mean upgrading pieces of equipment in communities with growing demand, or downgrading or removing the equipment if demand has dropped. The ministry is proposing to provide a policy statement through LTEP supporting “right-sizing” transmission and distribution assets at end of life and to have the Minister direct the IESO and the OEB to take a coordinated, long-term approach when addressing the need to replace these assets. To enhance coordination and value for money, there is a need to integrate considerations of asset end of life and right-sizing into electricity planning initiatives such as regional planning and the proposed integrated bulk system planning.

Commented [MK(8)]: Also forecast demand?

Modernizing the Utility Business

The ministry is proposing to undertake a process to review the regulatory framework for electricity bills and redesign and realign the requirements to increase consumer satisfaction, reduce burden on Local Distribution Companies (LDCs), and enhance the availability of digital billing. The ministry would convene a working group of LDCs and relevant stakeholders to provide advice on the redesign process and come forward with regulations to Legislation and Regulations Committee and Cabinet by the end of fall 2017 with proposed regulatory amendments.

Commented [MK(9)]: Please clarify timeframe. By the end of 2017?

The ministry is also proposing to direct the OEB to strengthen utility accountability and find ways to mitigate costs for consumers. This is intended to create a regulatory environment which better replicates the pressures and incentives of a competitive market (such as a reduction of revenues when consumer expectations are not met), whereby utilities are motivated to be more proactive, innovative, cost effective and less risk averse in the delivery of electricity service which responds to their customers’ needs and expectations.

Commented [MK(10)]: Please provide an example of what changes would be made to replicate a competitive market.

The Digital Transformation

The ministry is proposing to highlight the government's continued commitment to improve the ways that people can use data to make decisions about their energy use (e.g., Ontario Energy Report, Green Button etc.).

D. Strengthening our Commitment to Energy Conservation & Efficiency

Behind the Meter Generation:

According to current conservation and demand management (CDM) program rules, behind the meter generation (BMG) projects include Combined Heat and Power (CHP) and Waste Energy Recovery (WER) and are eligible to receive incentives through the Conservation First Framework (CFF) and the Industrial Accelerator Program (IAP). The CHP projects use a fossil fuel, such as natural gas, as an energy source and therefore, while reducing demand on the grid, generally result in a net increase in GHG emissions. The Ministry is proposing to change the program rules to make ineligible any new project that uses supplied fossil fuels as a primary fuel source.. To give time for LDCs and stakeholders to adjust, it is proposed that the IESO will continue accepting applications for BMG projects that use supplied fossil fuels until June 30, 2018 (changes would come into effect July 1, 2018) which has the effect of allowing the majority of existing project applications to proceed. Projects using recovered waste energy and renewable energy would continue to be eligible.

Commented [MK(11)]: Is there a specific application date applicants are working toward or is it an open call? Would CHP applications be accepted after LTEP is released?

ENERGY response:
Addressed in edits. IESO will cease accepting CHP applications on July 1, 2018.

In Front of the Meter Conservation:

In Front of the Meter Conservation (IFMC) technologies are deployed on the distribution system and provide electricity savings and peak reductions to customers behind the meter. Examples include technologies that reduce line losses and optimize voltage levels. The Ministry is proposing to encourage greater distribution system efficiency by allowing electricity savings from IFMC technology deployments to count towards electricity savings targets under the Conservation First Framework. IFMC technology deployments would be funded through LDC distribution rate applications (approved by OEB). Further, the Ministry is proposing to direct the OEB to examine and identify steps for pursuing opportunities for cost-effective modernization of the electricity system, including energy efficiency measures on the distribution system..

Green Button Standard:

Green Button is a data standard that provides households and businesses with access to data on their energy and water consumption and allows for the secure transfer of their own data from utilities to applications of their choice. Greater access to data through Green Button will help consumers to make informed decisions about their energy and water use and improve the energy efficiency of their home or business. Ontario is a leader in the implementation of Green Button and was the first jurisdiction in Canada to announce its adoption in 2012. Since that time, 11 electricity distributors have implemented Green Button, representing over 60% of smart meter customers in the province. The 2016 Climate Change Action Plan committed to expanding the Green Button program province-wide. The ministry is proposing to proceed with the development of the legislative and regulatory framework in fall 2017/winter 2018 to mandate the Green Button program for electricity and natural gas distributors, and enable voluntary implementation for water distributor utilities. A voluntary framework for water utilities is recommended due to reduced cost effectiveness of the program for this sector. The Ministry intends to work with MOECC to monitor and assess uptake among water utilities, and will provide technical guidance to support water utilities.

Demand Response:

2013 LTEP stated that Ontario will aim to use demand response (DR) to meet 10% of peak demand by 2025 (equivalent to ~2,400 MW under 2013 LTEP forecast conditions). This target includes peak reductions from a variety of initiatives, including the Industrial Conservation Initiative (ICI), Time-of-Use (TOU) rates, DR auction and DR pilots. While significant progress towards this target has been made, ENERGY is proposing to eliminate the 10% target so as to align DR with system needs and prepare for it to be rolled into a general capacity auction. The IESO is planning to implement a general capacity auction through which DR resources will compete with traditional generation resources and would be procured if cost-competitive with other offers.

Profiled Ongoing Initiatives:

The Ministry also plans to highlight ongoing work on energy efficiency standards, enhancing the value of conservation, alignment of conservation programs with Green Ontario Fund programs, smart thermostat incentive programs, home energy audit and retrofit program, and the Investor Confidence Project.

Commented [MK12]: Energy please add a line on what program actually does – e.g., change behaviour and result in reduced consumption?

Commented [HT13]: Any metrics of success to track against for the program?

Response: ENERGY hired MaRs to conduct a series of outreach activities over 2016 to build capacity among utilities and the market to adopt Green Button. MaRS reports that 11 electricity distributors have implemented Green Button Download My Data, representing over 60% of smart meter customers in the province, and 2 electricity distributors have implemented Connect My Data.

Commented [HT14]: Energy: how is this expected to impact adoption?

Response: ENERGY intends to work with MOECC to monitor and assess uptake among water utilities, and will look to leverage existing reporting processes to achieve this goal.

Only metered water utilities would be able to implement Green Button. Based on information gathered from Watertap Ontario and the utility IT survey as part of ENERGY's 2016 Green Button cost-benefit analysis, it was determined that all large and medium size water utilities are metered (39 large, 91 medium) and that 70%, or 385, of the 550 "small" water utilities are metered. As such, the consultant assumed that 515 water utilities would be directly implicated by a voluntary roll-out of Green Button in the period of 2018 – 2023.

Commented [MK15]: Have municipalities been consulted on this?

ENERGY Response: Yes. In 2016, ENERGY consulted with a broad range of stakeholders, including AMO and water utilities/municipalities.

Commented [MK16]: MOECC to review.

ENERGY Response: Edits as discussed with MOECC staff.

Commented [MK17]: How is DR procured / contracted for now? Who bids?

ENERGY Response: The 10% DR target includes ICI, TOU, DR auction and DR pilots.

Commented [HT18]: I had thought the timing on this was for 2024 anyway? Is there a need to eliminate the target given the participation on the auction is still a number of years away?

Response: It is expected that IESO will continue to hold the DR auctions until the capacity auction and that procurement targets will be driven by system need.

While significant enhancements have been made to DR, there is currently limited system need for incremental DR. The OEB's Market Surveillance Panel has reported (May 2017 report) that there have been limited activation of the DR resources procured given Ontario's healthy supply situation. This has direct environmental implications given that DR

Commented [MK19R19]:

Commented [MK20R19]:

Commented [HT21]: All of these have proposed action in the deck. Do they need policy approvals?

ENERGY Response: These proposed actions do not require policy (Cabinet) approval.

E. Innovating to Meet the Future

Grid Modernization:

Ontario has made important investments in grid modernization such as smart meters. Under the proposal, the 2017 LTEP would articulate the government's vision for distribution grid modernization: the creation of an environment that enables a modern, digital grid for Ontarians. The Ministry proposes to direct the OEB to address regulatory and cultural barriers in order to encourage innovation, optimal utility investment, and customer choice. For example, options include:

- Providing clarity to utilities on the treatment of smart grid investments, including addressing the "diffuse benefits" issue (i.e. investments by a utility may benefit other sector participants that do not contribute to the cost of the solution);
- Enabling utilities to make investments in non-traditional technologies, and earn a return on those investments, where they make economic sense, including investments behind-the-meter;
- Allowing utilities to partner on investments, and to participate in market opportunities where there is a clear benefit for customers; and
- Encouraging utilities to create plans that articulate how they intend to cost-effectively modernize their grids and promote innovation within their operations.

Commented [TS(22)]: This list could be trimmed down, but wanted to be clear that ROIs for smart grid investments are within the context of "where it makes economic sense", not just for the sake of modernization.

Commented [TS(23)]: Language modified to reflect more accurately OEB's current capital planning framework (Renewed Regulatory Framework for Electricity, or RRFE).

Renew Smart Grid Fund:

The Ministry is proposing to renew the Smart Grid Fund (SGF) with an additional investment of \$60M over 5 years. The SGF has helped many innovators become successful international companies (e.g. FleetCarma, Energate, Varentec). However there are still barriers to domestic integration of these solutions, and the ministry recommends that a renewed SGF is an important tool for overcoming barriers to modernization. Under the proposal, the 2017 LTEP would highlight a renewed SGF with an expanded scope and more targeted investments in innovative solutions that support grid modernization. The ministry will report to TB/MBC in summer 2017 for necessary approvals in advance of the announcement of the renewed SGF.

Energy Storage:

The Ministry is proposing to amend the regulatory framework for energy storage to remove unfair market and regulatory barriers, (e.g. the "double taxing" issue, which would happen when grid-connected storage providers pay the full costs of Global Adjustment when most of the power consumed to charge the storage system will be later discharged and used by another consumer that will also be charged Global Adjustment). This will enable energy storage to compete against other assets in future service procurements and general capacity auctions envisioned under IESO Market Renewal.

Commented [MK(24)]: Please provide some examples of unfair market and regulatory barriers.

Electric Mobility:

Fuel switching, including promotion of electric vehicles, was an important commitment under CCAP to reduce GHG emissions from the transportation sector. However, electrification of vehicles and transit will have an impact on electricity grid demand. The ministry is proposing that the 2017 LTEP support a deliberate transition to a low-emission transportation economy by authorizing specific actions, including: removing regulatory barriers that inhibit utilities from making economic decisions that support electric vehicle (EV) integration; implementing an overnight charging program that generates critical data for EV policy and program design while meeting CCAP objectives; developing a vehicle-grid integration road map, and facilitating information sharing between government and utilities.

Commented [MK(25)]: MTO and MOECC to review.

International Energy Demonstration Fund:

The ministry is proposing a pilot International Energy Demonstration Fund which would support Ontario energy companies (e.g., renewables, smart grid etc.) to undertake demonstration projects located in international jurisdictions. The proposal includes funding of \$10M and is expected to fund between five and ten high value demonstration projects.

Commented [TS26]: Over multiple fiscal years - TB submission will outline details

Program rules would be developed to give priority to Ontario-based project costs to maximize provincial benefit. Stakeholders have indicated a policy gap in provincial and federal energy innovation programs as they do not typically consider international projects to be in scope. The program would be designed in collaboration with the Ministry of International Trade (MIT), the Ministry of Economic Development and Growth (MEDG) and the Ministry of Research Innovation and Science (MRIS) to leverage their expertise in program development and utilize Ontario's representatives in foreign markets. The ministry will report to TB/MBC in summer 2017 for necessary approvals.

Commented [MK(27)]: MRIS, MEDG, MIT to review.

Expanding Net Metering:

The ministry is proposing to develop legislative and regulatory amendments that would expand and enhance Ontario's net metering framework, including enabling third-party ownership and related consumer protection measures and allowing for virtual net metering demonstration projects. The ministry is also proposing to work with the IESO to support the deployment of near-term virtual net metering demonstration projects.

Commented [MK(28)]: Please provide an example of third-party ownership projects and virtual net metering demonstration projects.

ENERGY response: Example provided below

A third-party owned project could entail a rooftop solar system installed on a homeowner's property but owned and operated by a private company.. The homeowner could pay no up-front costs, but would purchase electricity from the third-party owner over the life of the system. Under a virtual net metering arrangement, multiple customers in different locations could receive credits on their electricity bills associated with the generation from a renewable energy project located elsewhere.

Third-party ownership and virtual net metering emerged during stakeholder consultations regarding earlier net metering updates as two areas for enhancements to the existing net-metering framework. In addition, there has been increased interest in net metering given the planned wind down of the Feed-in Tariff (FIT) and microFIT procurement programs in 2017. The Ministry advises that the program changes would have a negligible impact on electricity rates. Implementation would require legislative and regulatory changes which would be brought forward for approval in fall 2017.

Commented [MK(29)]: Will the existing FIT and microFIT contracts be honoured?

ENERGY Response:
-existing FIT/microFIT projects will continue under their existing contracts

Smart Renewable Distributed Generation:

Renewable distributed generation (DG) and other distributed energy resources (DERs) are becoming more widely adopted in Ontario and have the potential to provide added value to customers and utilities. To date, renewable energy facilities have been sited based on the resource availability and connection capacity. Siting these facilities in areas that could provide local or broader system value, and pairing them with other innovative DERs, smart communications and controls, can provide added value to customers and utilities.

For example, on certain areas of the grid, a solar photovoltaic system combined with energy storage and intelligent communications could respond to a utility's need to help reduce load at times of peak electricity demand. The ministry is proposing to work with the IESO to develop a program to support the strategic deployment of these kind of innovative renewable DG projects in order to better understand their benefits and challenges and inform future policy decisions.

Profiled Ongoing Initiatives:

The ministry is also proposing to continue the ongoing work related to exporting Ontario's energy expertise, OEB Regulated Price Plan (RPP) pilot projects to provide greater choice in time of use billing practices for consumers, and promoting and exporting Ontario's nuclear innovation.

F. Responding to the Challenge of Climate Change

Climate Change Adaptation:

The ministry is proposing to support a number of actions related to climate change adaptation through collaboration and dialogue with MOECC, other ministries, agencies, stakeholders, and utilities. The ministry proposes to direct the OEB and IESO to integrate climate adaptation into their planning processes. Taken together, these initiatives will improve capacity in the distribution sector and inform the development of a province-wide energy distribution vulnerability assessment.

Profiled Ongoing Initiatives:

The ministry proposes to profile ongoing initiatives that have an adaptation co-benefit, such as: the remote connections project, shifting to renewable natural gas and lower carbon transportation fuels, supporting a transition to heating and cooling with renewable technologies, district heating and cooling initiatives, and supporting the transition to near and net zero carbon buildings.

G. Supporting Indigenous Capacity and Leadership

Indigenous participants in engagement sessions emphasized the need for enhanced affordability supports and a desire for greater participation in the energy sector. Many First Nations also highlighted the need for program dollars to support the implementation of plans developed under the province's very successful Aboriginal Community Energy Plan (ACEP) program.

Evolve Indigenous Conservation and Support Programs:

Commented [MK(30)]: MIRR to review.

The Ministry proposes to direct the IESO to, in alignment with the Mid-Term Review of the CFF and IAP, and informed by engagement with Indigenous communities, prepare a report on options to improve conservation programs for First Nations and Métis. The ministry also proposed to, re-profile an existing \$10M/year rate based funding envelope to focus on Indigenous energy programming including the development of program options for the implementation of community energy plans under ACEP.

Profiled Ongoing Initiatives:

The Ministry is proposing to profile ongoing initiatives related to electricity affordability for Indigenous communities (e.g., First Nations Delivery Credit, Ontario Electricity Support Program expansion), the connection of remote communities to the provincial grid as well as the province's work to explore innovative solutions for the communities that are uneconomic to connect. In addition, the ministry proposes to highlight plans to enhance engagement with Indigenous communities and further investigate innovative financing models and support tools that may help lower financing costs and stimulate more capital in the financing of Indigenous energy projects.

H. Regional Priorities

Regional Economic Development:

The ministry proposes to indicate in the 2017 LTEP that it will explore ways to use federal and provincial infrastructure and economic development funding to support electricity transmission and distribution infrastructure that supports regional economic development, and respond to regional disparities in electricity infrastructure that were highlighted during engagement with stakeholders and communities. Reasonable certainty with respect to availability of a funding source or program is necessary as such a statement would raise stakeholder expectations.

Commented [MK(31): Is the ministry seeking funding for this as part of this proposal?

Regional Planning Review:

The ministry is proposing to direct the IESO to review the regional planning process and report back with options and recommendations to address challenges and opportunities. This review would include integrating regional planning with the new bulk system planning process proposed in this submission, as well as with community energy planning. It would also include addressing barriers to non-wires solutions, such as demand response and distributed energy, in regional planning, and ensuring assets are right-sized at end of life, as articulated earlier in this submission.

Commented [MK(32): Energy please advise on timeframe for this work.

Commented [MK(33): Wireless?

Since 2013, an enhanced regional planning process has brought communities together to identify their electricity needs and develop cost-effective solutions to meet them. Over the past three years, the electricity needs of all 21 of Ontario's electricity planning regions have been evaluated, marking the completion of a full cycle of regional planning assessments, which presents a good opportunity to review the planning process.

IESO and OEB Implementation Directives

The Ministry is seeking Cabinet approval to develop implementation directives to the IESO and OEB in support of the following objectives:

Commented [MK(34): Energy please confirm whether these will be part of the submission. If so, please provide a brief summary of each.

IESO Directive:

- Support Indigenous Capacity and Leadership
 - Report on options to improve conservation programs for First Nations and Métis.
 - Evolve support programs offered to Indigenous communities and organizations to better align with community needs and interests.
- Encourage an Innovative Sector
 - Assess system impacts of increased net metering and identify opportunities to enhance local and system value of distributed energy resources under net metering framework.
 - Develop a program that supports the strategic deployment of renewable distributed generation projects.
 - Work with OEB to identify barriers to entry for storage facilities and identify appropriate mitigation strategies.
- Deliver a Flexible and Efficient System
 - Develop a formal bulk system planning process. Process will consider a coordinated approach to replacing transmission assets at end of life.
 - Develop a competitive transmitter selection or procurement process. Identify specific pilot projects to be used to develop the competitive transmitter process.
 - Review the regional electricity planning process and report back with options to address challenges and opportunities.
 - Review the technical criteria used to assess customer reliability for the purposes of identifying and evaluating the need for and effectiveness of local area enhancements.

Commented [CRED35]: This bullet may be removed pending further internal discussions.

OEB Directive:

- Delivering Efficiency and Value
 - OEB to examine opportunities to strengthen utility accountability and reporting related to service issues, including reliability
 - Examine cost effectiveness of modernizing and removing barriers in Ontario's electricity sector, including in front of the meter conservation and non-wires solutions (conservation and demand response, distributed generation).
 - On receipt of recommendations from the IESO, Identify steps to implement changes to improve utility regional planning processes
 - Identify steps for encouraging a coordinated approach to replacing transmission and distribution assets at end of life.
- Ensuring Affordable and Accessible Energy
 - OEB to examine tools to mitigate costs for ratepayers
 - Protect consumers in the natural gas sector
 - Reduce costs and find efficiencies in the distribution sector

- Strengthen consumer protection related to unit sub-meter providers
- Enhancing Commitment to Energy Conservation and Efficiency
 - OEB to move forward with regulated price plan roadmap and consider pricing structures that give consumers control and the ability to respond to pricing signals
 - Enhance energy literacy
- Responding to Climate Change Challenge
 - OEB to provide guidance to utilities on approaches for integrating cost effective opportunities for climate change adaptation
- Encouraging an Innovative Sector
 - OEB to work with utilities to encourage a culture of innovation in the distribution sector and provide opportunities for utilities to raise the profile of their modernization and innovation plans

The directives are intended to be high-level, allowing the agencies to determine the specific initiatives to meet LTEP objectives and would be released simultaneously with the release of the LTEP document. The directives only cover new initiatives that fall within IESO and OEB mandates

Some LTEP policy initiatives require amendments to previous directives to the OEB. Prior to the LTEP release, the Minister of Energy will issue an amending directive to the OEB to achieve the following objectives:

OEB Amending Directive:

- Enhancements to Conservation Demand Management (CDM)
 - The OEB will annually review and publish Distributor CDM programs and measures used by a Distributor to maximize the efficiency of its new or existing distribution system infrastructure where the resulting electricity reductions are counted towards the target allocated to the Distributor.
 - CDM shall be considered to exclude behind the meter customer generation that uses fossil fuels purchased from or otherwise supplied by a third party as a primary fuel source.
 - CDM shall continue to be inclusive of behind the meter generation, where the generation of electricity is primarily from renewable energy sources or primarily from heat or fuel that is a waste by-product of a facility.

The ministry will table the final implementation directives along with the LTEP document in September/October 2017.

The Minister will request that the IESO and OEB submit implementation plans for Minister's approval by December 31, 2017.

Stakeholder and Partner Considerations:

General public (including residential and small businesses) – Neutral: it is expected that the general public will be interested in supply choices, conservation and support programs,

and consequences with regards to electricity costs, emissions, safety (nuclear), and local economic development opportunities/consequences.

Large Industrial and Commercial Consumers – Neutral to positive: it is expected that industrial and commercial consumers will be most interested in energy cost certainty during Ontario's transition to decarbonisation, and are in general supportive of conservation initiatives.

Tenants – Mixed: the Federation of Rental Housing Providers of Ontario (FRPO) and Housing Services Corporation (HSC) were supportive of conservation but concerned about the upfront capital required for energy retrofits. Based on their engagement feedback, it is expected that FRPO will be interested in the way that affordability and conservation initiatives will help low-income tenants in the rental housing sector who are not in sub-metered units.

Commented [MK(36)]: MHO to review.

Northern communities – Neutral to negative: Northern communities raised concerns about the impact of electricity delivery costs, declining reliability, capacity constraints, and the costs of system expansion/enhancement on regional economic development. There may be some concern about government commitment to the East-West Tie, and a new phased approach for the Northwest Bulk project.

Commented [MK(37)]: MNM to review.

Indigenous communities – Positive: First Nations and Métis should be generally supportive as the proposed initiatives respond to feedback received about energy costs, need for support for community energy plan implementation and small-scale, local energy opportunities, as well as continued support for conservation.

Commented [MK(38)]: MIRR to review.

eNGOs – Mixed: Environmental groups will be supportive of conservation, renewables, and continued development of the clean-tech sector. However, they may express disappointment regarding the commitment to nuclear refurbishment and the emphasis on electricity.

Commented [MK(39)]: MOECC to review.

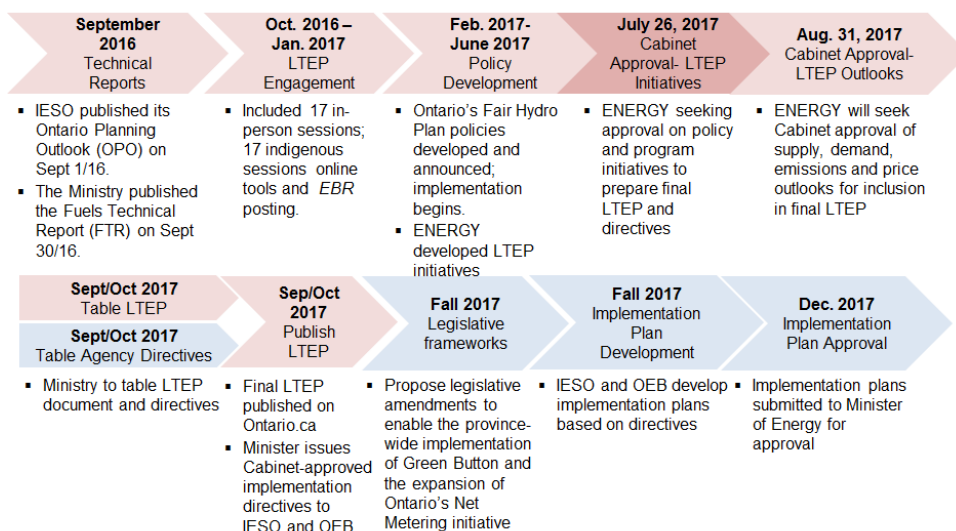
Natural Gas Utilities – Neutral to positive: it expected that utilities will be interested in incentives for compressed and renewable natural gas and demand side management, and opportunities for innovation.

LDCs – Mixed: LDCs will be supportive of an environment that starts to think through removal of regulatory barriers in the industry and provide the ability to innovate. There is also an emphasis of cost savings and efficiencies for the sector, and this will likely cause mixed reactions amongst LDCs. There may be some concern about strengthening reliability reporting and standards while still dealing with cost pressures.

Delivery:

Following approval of the LTEP components, the Ministry will develop the final LTEP and OEB and IESO Implementation directives and report back to Cabinet for approval. ENERGY will also report to TB/MBC for necessary approvals of any components of the plan prior to release of the final document.

2017 LTEP – Process



11

Risks and Considerations:

Rate Impacts The Ministry will return to Cabinet on August 30, 2017 to seek approval on the modelling outlooks to be included in the LTEP

Climate Change - It is anticipated that there will be increased public interest in the 2017 LTEP over previous plans given the connection to Ontario's Climate Change Strategy and Climate Change Action Plan. The plan includes implementation of several commitments made under the CCAP, including the province-wide implementation of Green Button. It is expected that the plan will be reviewed by some stakeholders to assess consistency with the government's commitments under the CCAP. In some cases (e.g., GHG standards for water and wastewater facilities), the ministry is not proposing to implement CCAP initiatives as originally envisioned. In addition, it is expected that the demand and supply outlooks laid out in the LTEP will be scrutinized to assess consistency with the government's overall GHG emission reduction targets.

Implementation / Delivery – Unlike previous LTEPs, the 2017 LTEP sets out high level policy goals and objectives, leaving the Independent Electricity System Operator (IESO) and Ontario Energy Board (OEB) flexibility to implement the plan. This approach is consistent with the requirements under the *Electricity Act, 1998*, which requires the agencies to prepare implementation plans in line with the directives and the LTEP for the Minister of Energy's approval. However, it means that the specific details and impacts of the proposed plan may not be finalized at the point in time the government approves and releases the

LTEP. Energy will work closely with the IESO and the OEB to ensure consistent and appropriate implementation of the plan, according to the directives set out by the Minister of Energy and approved by Cabinet.

Commented [MK(40)]: Energy please review.

Linkages:

Ontario's Fair Hydro Plan – On June 1, 2017, the *Ontario Fair Hydro Plan Act, 2017* became law, reducing electricity bills for residential consumers and as many as half a million small businesses and farms across the province. The OFHP also helps electricity consumers by enhancing a number of electricity support programs. The OFHP initiatives will feature prominently in the province's next LTEP as well as have impacts on the province's energy planning activities for decades.

IESO Market Renewal - The IESO has begun a Market Renewal initiative to redesign the province's wholesale electricity markets. Market Renewal is intended to result in a more competitive marketplace that efficiently meets system needs at the lowest cost and ensures Ontario's climate change commitments are met. It will also help Ontario prepare for the future by creating a framework that can effectively incorporate new and emerging technologies (e.g., non-GHG emitting generating resources, etc.). In addition, this initiative forms a key component of Ontario's plan to bring down the cost of electricity and is expected to save up to \$5.2 billion over a 10-year period starting in 2021. The IESO is working closely with partners in the electricity sector in the development of Market Renewal.

Commented [MK(41)]: Energy please provide brief summary of IESO market renewal program.

Truth and Reconciliation Commission of Canada (TRC) – In June 2015, the TRC released an Executive Summary of the findings in its multi-volume Final Report, including 94 "calls to action" for federal, provincial, territorial and Indigenous governments to further reconciliation between Canadians and Indigenous peoples.

Coordinated Review of the Provincial Plans – The four provincial plans (Growth Plan for the Greater Golden Horseshoe (GGH), Greenbelt Plan, Niagara Escarpment Plan, and Oak Ridges Moraine Conservation Plan) have been recently updated as a result of an extensive review and consultation. The plan updates are focused on the following themes: building complete communities, protecting agricultural land and supporting agriculture, protecting natural heritage and water, growing the Greenbelt, responding to climate change, providing infrastructure and improving alignment and implementation. Municipal official plans in the GGH region will have to conform to the four plans by 2022.

Long-term Infrastructure Plan –

Ontario's Climate Change Action Plan – Released in summer 2016, the CCAP reiterated the 2016 Budget commitment to greenhouse gas (GHG) emissions reductions and stated that Ontario intends to invest in initiatives that both reduce GHG emissions and ensure that the net impact of cap and trade would not result in an overall increase in electricity costs for commercial and industrial consumers. In addition, it noted that there would be a modest benefit of up to \$2 per month, on average, to residential consumers. This commitment to residential consumers was met by the 8% rebate implemented on January 1, 2017.

The CCAP also committed to the establishment of a new Climate Change agency that would act as one window for the delivery of climate change-related programs (e.g., low-carbon technology and energy management programs). The ministry has been working with MOECC and the IESO to establish GreenON, which is expected to launch its public website in summer 2017.

The CCAP also committed to “consider options for legislation/regulation change that lessen the impact on residential tenants of increased energy costs from cap and trade”. This commitment was addressed through amendments to the *Residential Tenancies Act, 2006* brought forward by the Ministry of Housing in spring 2017.

The CCAP also included commitments to implement a number of policy initiatives, including expansion of Green Button province-wide, a social benchmarking portal, and GHG targets for water and wastewater facilities. The ministry is proposing to implement several of these initiatives through this proposal.

Terms you need to know

- **Global Adjustment (GA)** – Amount that accounts for differences between the market price of electricity and rates paid to regulated and contracted generators and for conservation programs. The GA is collected from all electricity ratepayers in Ontario.
- **Local Distribution Companies (LDCs)** – Local electricity utilities, responsible for distributing power from transmission lines to people's homes (e.g., Hydro Ottawa, Toronto Hydro, etc.)
- **Regulated Price Plan (RPP)** – Since April 2005, the Ontario Energy Board (OEB) has administered an electricity price plan that provides stable and predictable electricity pricing, encourages conservation and ensures the price consumers pay for electricity better reflects the price paid to generators. This pricing plan is known as the Regulated Price Plan (RPP). About 5 million residential consumers, small businesses and farms are eligible for the RPP.
- **Ontario Power Generation (OPG)** – A business corporation owned by the province that owns and operates generation assets, including nuclear and hydro, and generates almost half of Ontario's electricity.
- **Ontario Energy Board (OEB)** – A Crown Agency that independently regulates Ontario's electricity and natural gas sectors in the public interest. Implements an open and transparent process to allow for stakeholders to comment on various items.
- **Independent Electricity System Operator (IESO)** – An independent corporation and agency of the Ministry of Energy that operates the electricity market in Ontario. Balances the supply of and demand for electricity in Ontario and then directs its flow across the province's transmission lines, including interties with other jurisdictions.
- **Unit Sub Meter Providers (USMPs)** – USMPS are private companies that provide metering services to multi-unit residential buildings so that individual unit residents can be billed for electricity based on their individual consumption levels.
- **Demand Response (DR)** – Provides price or financial incentives to residential and business users to shift or reduce their electricity usage away from peak periods of consumption.

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APPENDIX A: Multi-Year Action Plan

Below is an extract taken from the MYAP which demonstrates the overall strategic plan for the initiative that this policy submission supports. This excerpt represents the approved plan to date, and may not reflect the specific policy and delivery timelines identified in the Cabinet Minute above.



MYAP Slice 2017-07-12

KEY ACTIVITIES	YEAR 1 (2014-2015)	YEAR 2 (2015-2016)	YEAR 3 (2016-2017)	YEAR 4 (2017-2018)	YEAR 5 (2018-2019)	GOVERNANCE AND RISKS
	A M J J A S O N D J F M	A M J J A S O N D J F M	A M J J A S O N D J F M	A M J J A S O N D J F M	A M J J A S O N D J F M	
15.11 Long-Term Energy Plan (LTEP) and Related Initiatives Pillar: Managing Ontario's Energy Resources	LTEP Progress	ON Conservation First Agenda Sustainable - Electricity Supply Conservation First Leg Intro	Province-wide consultation Home Energy - Retrofit Launch ESO doc. initiates planning	*Approval of LTEP Public release of LTEP Quebec RFP with US States		Lead: ENERGY Supporting: MOECC Risk Categories: Delivery / Operational, Stakeholder / Perception Last updated: 05-06-17 Increased Risk Status 

Appendix A: Summary Table of Policy Approvals Sought

Policy Proposal	Driver	New Gov. Costs	Leg/Reg (Y/N)
B. Ensuring a Flexible Energy System			
East West Tie: When NextBridge files a Leave to Construct application with new higher cost estimate, the Minister will respond to increased costs with a request for an updated need assessment from IESO.	Value for money	N	N
North West Bulk: The LTEP will outline a 3 phase approach for the project to ensure construction occurs when most needed and highlight possible future inter-jurisdictional collaboration with Manitoba.	Value for money	N	N
Bulk System Planning: The Ministry will direct IESO to establish a formal process for planning the future of the integrated province-wide "bulk" system.	Transparency, value for money	N	N
C. Improving Value and Performance for Consumers			
Preserving Transmission Corridors: The LTEP will detail the need for a new transmission line through the Northwest Greater Toronto Area and highlight the need to protect the corridor for the line.	Process improvements, value for money	N	N
Enhancing Reliability: The LTEP will detail the government's policy objectives for utility reliability and quality of service and will direct the OEB and IESO to review reliability standards.	Improved service	N	N
Competitive Transmitter Selection: The Minister will direct the IESO to develop a competitive transmission selection or procurement process and identify potential pilot projects.	Process improvements, value for money	N	N
Right-sizing Assets: The Minister will direct the IESO and the OEB to take a coordinated, long-term approach when addressing the need to replace end-of-life assets.	Process improvements, value for money	N	N
Modernizing the Utility Business: Enhanced regulation of LDCs, Improved Regulatory Efficiency, Bill redesign	Process improvements, value for money, transparency, burden reduction	N	N
D. Strengthening our Commitment to Energy Conservation & Efficiency			
Behind the meter generation (BMG): Phase out incentives for BMG projects that use supplied fossil fuels (e.g. natural gas Combined Heat and Power projects).	GHG reduction	N	N
In Front of the Meter Conservation (IFMC): Enable IFMC projects, and ask OEB to examine and identify steps for pursuing opportunities to encourage LDCs to pursue energy efficiency on the distribution system.	Efficiency, value for money	N	Y
Green Button Standard: LTEP to reaffirm Ontario's commitment to implement Green Button province-wide and indicate government's intent to bring forward amending legislation to mandate Green Button for electricity and natural gas distributors.	Education, transparency, GHG reduction	N	Y
Evolution of Demand Response: Eliminate the long-term DR target of 10% of peak demand reduction by 2025 while reaffirming the commitment to evolve the DR auction into the capacity auction.	Flexibility	N	N
E. Innovating to Meet the Future			
Grid Modernization: Provide direction to OEB to address regulatory and cultural barriers in order to encourage innovation, optimal utility investment, and customer choice.	Process improvement, innovation	N	N
Renew Smart Grid Fund: Renew the SGF with an expanded scope and more targeted investments in innovative solutions that support grid modernization-\$60 million from the tax-base over 5 years.	Ec. Dev., innovation	Y	N

Commented [HT42]: Consideration of adding a rate impact column as well

Commented [HT43]: TBC if other conservation items under identified as ongoing require policy approvals.

CRED Response: ENERGY does not believe additional policy approvals required for conservation

Commented [CRED44]: ENERGY is proposing to amend the *Green Energy Act, 2009* and *Ontario Energy Board Act, 1998* to enable the implementation of Green Button province-wide through a subsequent regulation.

Policy Proposal	Driver	New Gov. Costs	Leg/Reg (Y/N)
Energy Storage: Update market and regulatory rules so storage can be introduced onto the grid where it makes technological and economic sense.	Process improvement, GHG reduction	N	N
Electric Mobility: Remove regulatory barriers; develop vehicle-grid integration road map and facilitate information sharing between government and utilities.	Process improvement, GHG reduction, customer choice	N	N
International Demonstration Fund: Establish a \$10 million pilot program funded from the tax-base to support the demonstration of Made-in-Ontario energy technologies in markets outside of Canada.	Ec. Dev., innovation	Y	N
Expanding Net Metering: Expand and enhance Ontario's net metering framework, including enabling third-party ownership and related consumer protection measures, and allowing for virtual net metering demonstration projects.	Customer choice, supply	N	Y
Smart Renewable Distributed Generation: Work with the IESO to develop a program to support the strategic deployment of innovative renewable distributed generation projects.	Customer choice, value for money, GHG reduction, innovation, supply	N	N
F. Responding to the Challenge of Climate Change			
Climate Change Adaptation: With a focus on the energy distribution sector, Ontario will strengthen the ability of the energy industry to anticipate the effects of climate change and integrate the impacts into operational and infrastructure planning, by actions such as knowledge building across the sector to conduct a province-wide energy distribution climate change vulnerability assessment in the future.	Resilience, reliability, value for money	N	N
G. Supporting Indigenous Capacity and Leadership			
Evolve Indigenous Conservation Programs: IESO will produce a report, informed by engagement with Indigenous communities, on options to improve conservation programs for First Nations and Métis including communities served by Independent Power Authorities.	Service improvement, GHG reductions, efficiency, value for money	N	N
Evolve Indigenous Support Programs: Evolve support programs currently offered by IESO to better align with community needs, which could include support for energy plan implementation, small-scale renewables, conservation and other community-scale energy opportunities.	Ec.dev., Indigenous engagement, resilience,	N	N
Access to Financing: The 2017 LTEP will signal Ontario's intent to examine new financing models and support tools to help lower financing costs of First Nation or Métis-led or partnered projects.	Ec. Dev., program improvement	N	N
H. Regional Priorities			
Regional Economic Development: The Ministry will explore ways to use federal and provincial infrastructure and economic development funding to support electricity transmission and distribution infrastructure that supports regional economic development.	Ec. Dev., value for money	N	N
Regional Planning Review: Direct IESO to review the regional planning process.	Process improvement, value for money, transparency	N	N

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