
LTEP Initiatives Update

DM/CoS Meeting
June 22, 2017

Context

- The Ministry of Energy continues to develop the next Long-Term Energy Plan (LTEP).
- From January to May 2017, two rounds of policy briefings were held on potential LTEP initiatives.
- This deck re-introduces all these initiatives, categorized into two groups:
 - **Group 1: Direction required**
 - Initiatives where decisions are still needed, or language continues to evolve.
 - **Group 2: Decisions previously made**
 - List of the initiatives where decisions were made at policy briefings and no further decisions are needed.

Group 1: Direction Required

LTEP Initiatives

Initiative	Considerations	Decision
Renew Smart Grid Fund: Renew the Smart Grid Fund. The program will be expanded to cover the energy sector broadly, but focus on building on momentum created by SGF.	Proceed, depending on allocation of funding. Ministry will need to engage with central agencies to include renewal of SGF in Fall Economic Statement in order to meet the 2013 LTEP commitment to expand the program (\$60M over 5 years).	
International Demo Fund: Support an International Demonstration Fund for Ontario energy technologies in projects abroad.	Commitment to develop a program, which could be delivered through the SGF or a similar mechanism. Recommendation is for \$10M over a 2-3 year period to pilot the program with 4-5 projects.	
Electricity Bill Redesign: Undertake a refresh of the regulatory framework to make the electricity invoice more valuable to consumers.	The Ministry has announced its intention to proceed with this effort to LDCs. Including in LTEP could link the measure to efforts to make the sector more accessible to consumers.	

LTEP Initiatives

Initiative	Considerations	Decision
Regional Economic Development: The Ministry will explore ways to support regional economic development through electricity transmission and distribution infrastructure by seeking provincial and federal infrastructure and economic development funding.	Ministry staff met with MOI to discuss including exploratory language in LTEP 2017. A decision is required on inclusion of exploratory language, pending MOI's input, expected end of June.	
East-West Tie: The LTEP will discuss the East-West Tie as an the preferred option to provide a long-term, reliable supply of electricity to Northwest Ontario.	It is expected that Leave to Construct will be filed prior to LTEP. Decisions: LTEP could signal that ENERGY has asked IESO to update its assessment of project need based on new cost and other information. LTEP could also state that the ministry will consider all options to reduce costs for ratepayers once it receives IESO's update. In response to NextBridge's increased costs the Ministry has the choice to remain silent or to address the increases through amended LTEP language/communications.	
Northwest Bulk: The LTEP will chart a course forward for the Northwest Bulk by supporting a phased approach to completing the project. It was proposed that an OIC to declare the project a priority be issued at the same time as LTEP.	A decision is required whether to delay the OIC (e.g. to the time of Leave to Construct). A change in the approach may be prudent considering the magnitude of NextBridge's cost increases related to the East-West Tie. The decision will not change the language in the LTEP but it will require IESO to issue a hand-off letter to Hydro One without an accompanying OIC.	
Greenstone: A decision was made to not name a transmission line in Greenstone as a priority in LTEP.	A decision is required on whether the Ministry could include a call-out box in the LTEP highlighting the work of the Working Group. A decision is needed on whether to highlight Greenstone, and the work of the working group, in the LTEP.	

LTEP Initiatives

Initiative	Considerations	Decision
Introduce Renewable Natural Gas (RNG) Into the Natural Gas Supply: Ontario will seek to maximize the value of existing natural gas infrastructure by “greening” the natural gas supply with RNG and similar innovations.	Work continues with the OEB and MOECC to determine the appropriate funding amount (e.g., more from GGRA), preferred timelines, points of regulation and the appropriate role of government and regulator (OEB).	
IESO Modelling: IESO’s base case is Outlook B from the OPO combined with more recent developments and higher EV uptake.	A decision is required on whether the Cab Sub/ LTEP document should use these assumptions. Should the cost reduction scenarios be included in the LTEP?	
Energy System Integration: Electricity and fuels modelling have been kept separate thus far.	A decision is required on whether the LTEP should include charts combining electricity and fuels. Which FTR outlook should be used, and what updates need to be made to integrate electricity and fuels?	
Market Renewal in IESO directive: Ministry could direct IESO to ensure the Market Renewal design process considers the ability of proposed reforms to meet government policy objectives, such as climate change mitigation, and consider complementary mechanisms if needed.	IESO proposes not including this in the directive and instead including reference in the LTEP document to complementary market mechanisms for addressing policy objectives. Decision to signal in the LTEP and/or the IESO direction about the importance of the capacity auction meeting certain low-carbon requirements.	

Bending the Cost Curve Initiatives

Initiative	Considerations	Decision
Thunder Bay and Atikokan: Replacement of Thunder Bay and Attikokan generating stations at a more competitive cost at contract expiry	IESO estimated savings of ~ tens of billions/year	
Shift Conservation Costs: Starting in 2018, fund conservation costs through the GGRA	IESO estimated savings of ~ 100s of millions/year	
Shift Renewable Costs: Funding a percentage (1-%) of renewables costs through the GGRA starting in 2017	IESO estimated savings of ~ 100s of millions/year	
Ending current Renewable Procurements: Not proceeding with MicroFit 2017 and FIT 5, and exiting LRP1 contracts	IESO estimated savings of ~ tens of billions/year	
Market Renewal: Assuming savings from the Brattle Report in LTEP	Assume savings of \$5 billion	
Distribution Sector Savings: Encourage distribution sector efficiencies and savings	The Distribution Panel Report in their 2012 report assumed a potential savings of \$1 billion in the distribution sector from operations, maintenance and administrative costs for back end savings from LDCs.	

Group 2: Decisions previously made

Encouraging Greater Customer Choice

Initiative

RPP Pilots: LTEP will highlight that the OEB is testing innovative Time-of-Use (TOU) price structures through pilots, including price plans with flat rates, low overnight rates and seasonal TOU rates. Pilots will inform future OEB decisions on TOU price plans in Ontario.

Class A Customers: Reference existing industrial price mitigation initiatives, and that government will continue to monitor industrial electricity prices for further opportunities. Reference that ICI has been expanded to allow more consumers to opt in, and future report on ICI expansion uptake/effectiveness. ENERGY to assist in providing greater awareness of available energy efficiency programs for Class A customers.

Class B Customers: Explore innovative rate designs to provide a better price signal and/or increase consumer choice for non-RPP Class B consumers. ENERGY to assist in providing greater awareness of available energy efficiency programs for Class B customers.

Renewable Energy

Initiative

Successful Renewable Energy Sector: LTEP will confirm Ontario's commitment to renewables without providing a specific renewable energy capacity target.

LTEP will showcase Ontario's successes in bringing online renewable energy generating capacity, providing opportunities for communities to and contributing to Canada's leading clean-tech and renewable energy sectors.

ENERGY will continue to leverage available initiatives and funding programs in support of the renewable energy sector in commercialization of technologies and exploring export opportunities.

Net Metering: LTEP will highlight the July 1, 2017 amendments to the 2005 Net Metering Regulation and additional planned updates to enable third party ownership, broadening opportunities for innovative customer-utility relationships and customer choice. ENERGY will also work with IESO to support the deployment of near-term virtual net metering (VNM) demonstration projects in order to better understand system and other impacts, and ultimately inform potential future net metering policy decisions.

Distributed Generation (DG): ENERGY will work with IESO to develop a funding program to strategically deploy innovative, renewable DG projects that provide data to inform future grid modernization and net metering policy decisions; support grid interoperability; and align with market renewal.

District Heating/Cooling; Solar Hot Water/ Air Heating; Ground Source/Air Source Heating: ENERGY to further examine existing programs and research policies as required to encourage development of these technologies. ENERGY to work with MOECC/MMA as required.

Regional Planning

Initiative

Regional Planning Review: OEB/IESO to conduct a review of the regional planning process, taking into account lessons learned from the first cycle of planning, and report back with joint options and recommendations to address challenges and opportunities.

OEB/IESO will identify barriers to non-wires solutions, options to integrate regional planning with bulk & community energy planning; options for streamlining regional planning and options to integrate regional planning with need to replace transmission assets reaching end of life.

Transmitter Selection: The Ministry will direct the IESO to recommend potential pilot projects and provide a plan to develop a competitive transmitter selection or procurement process in its Implementation Plan. Experience gained through pilot projects will help inform IESO on the development of the competitive transmitter selection or procurement process.

Enhancing Market Based Outcomes

Initiative

Carbon Market & Supply Decisions: The carbon market can be used to influence supply planning. For example, a gas-fired electricity generating facility offering into capacity and energy markets would factor in the increased costs of the cap and trade program.

Annual Capacity Auction: Make the necessary changes to implement capacity auctions once IESO's Market Renewal Initiative is completed, as long as the projected net benefits remain positive.

Introduce a Day-Ahead Market: Take the necessary steps to implement a "day-ahead" energy market, once IESO's Market Renewal Initiative has completed, as long as the projected net benefits remain positive.

Adopt a Single-Schedule System: Take the necessary steps to move to a "single-schedule" system, once IESO's Market Renewal Initiative has completed, as long as the projected net benefits remain positive.

System Flexibility and Operability: Enhance the flexibility of Ontario's supply resources through 'technology neutral' processes that:

- 1) increase utilization of existing resources
- 2) enable simple cycle operation at combined cycle plants or
- 3) add new resources such as peaking generation, grid energy storage or demand response where cost competitive.

Maximizing Existing Assets (Electricity)

Initiative

Nuclear Projects: Continue with ongoing nuclear projects, where economic:

- A) Continue with planned refurbishment of 10 units at Darlington and Bruce; and
- B) Continue support for ongoing Pickering operation to 2022/2024

Do not renew expiring contracts: Do not extend existing contract terms; consider potential for market participation upon expiry. Generators to participate in market renewal initiative. IESO already pursuing this action so recommend referencing ongoing work in LTEP document.

Expand Intertie Trade: Enhance intertie capacity where economic to allow electricity importers greater opportunities to access the Ontario market and domestic generators greater access to export markets. In particular, undertake transmission upgrades in the Ottawa area. IESO already pursuing this action so recommend referencing ongoing work with other jurisdictions in the LTEP document.

Bulk System Planning : The Ministry will direct the IESO to develop a bulk transmission planning process in order to identify specific projects that address needs as they materialize over the course of the planning period.

Transmission/Distribution Right-Sizing: The Ministry will direct the IESO and the OEB to ensure a coordinated, long-term approach is taken when addressing the need to replace transmission and distribution assets at end of life.

Corridor Protection: The Ministry will also work with key ministries and agencies to assess additional options to secure the required corridor lands in a timely fashion.

Enhance Reliability: The Ministry will ask the OEB and IESO to enhance customer reliability and quality of service standards and guidelines.

Maximizing Existing Assets (Fuels)

Initiative

~~**Introduce Renewable Natural Gas (RNG) Into the Natural Gas Supply:** Ontario will seek to maximize the value of existing natural gas infrastructure by “greening” the natural gas supply with RNG and similar innovations. The OEB will oversee introduction of RNG in Ontario’s gas supply, consistent with any government requirements. ENERGY to work with MOECC regarding the introduction of a renewable content requirement for natural gas, as outlined in CCAP.~~

Increased Use of Lower-Carbon Fuels in the Transportation Sector: Seek to maximize the value of existing transportation fuels infrastructure to help lower GHG emissions by: i) increased use of natural gas / RNG as a transportation fuel; and ii) increased blending into conventional transport fuels of ethanol, biomass and other “drop-in” renewable fuels. ENERGY to work with MOECC on CCAP initiatives related to a Renewable Fuel Standard (RFS) for gasoline and pilot projects related to use of RNG in transportation.

Strategic Use of Fuels to Support Electrification: Seek to maximize the value of existing fuels infrastructure while reducing GHG emissions by making strategic use of fuels to support electrification. Examples could be using both a heat pump and gas furnace for heating and cooling homes, and using off-peak electricity to produce hydrogen that is stored in the natural gas system. ENERGY to work with MOECC on rollout of homeowner electrification programs under CCAP.

Supporting Indigenous Capacity & Leadership

Initiative

Evolve Programming: Continue IESO support programs for Indigenous communities within existing \$10M funding envelope. Continue support for *Aboriginal Community Energy Plans* and for education and capacity building initiatives. Evolve programs to include support for energy plan implementation, which could include small-scale renewables, conservation and other community-scale energy opportunities. Explore options for models that can assist Indigenous communities with accessing financing for energy projects.

Improving conservation program availability : IESO will develop a report, informed by engagement with Indigenous communities, on options to improve conservation programs for First Nations and Métis communities including improving availability, with consideration for, but not limited to, programs offered under the CFF and the Demand Side Management (DSM) Framework.

Support Energy Resiliency- Transmission: Priority transmission projects from LTEP 2013 remain priority; ensure appropriate programs are in place to support participation of Indigenous communities in major transmission projects; Enhance customer reliability and service standards in northern and remote areas.

Support Energy Resiliency- Remotes: Continue to work with the federal government to finalize a cost-sharing agreement in support of the grid connection of 21 remote First Nations;
Continue to work towards the early connection of Pikangikum; Continue to engage with remote First Nation communities to undertake the planning and transition work for connections
Continue to engage with the four communities that are not economic to connect to the grid to develop diesel-reduction options that meet community energy needs

Aboriginal Loan Guarantee Program: Work with OFA to consider revisions to Aboriginal Loan Guarantee Program.

Enhancing our Commitment to Conservation

Initiative

Conservation Target: Reaffirm ENERGY's commitment to the long-term conservation target of 30 TWh in 2032, while committing to assess the achievable potential for both electricity and natural gas conservation and options to enhance the value of our conservation investments.

Demand Response Target: Eliminate the long-term Demand Response (DR) target to align with system needs and a technology-agnostic approach; re-affirm intent for DR resources to compete in capacity market.

Eligibility of BMG Projects under CFF and IAP: Phase out incentives for BMG projects that use supplied fossil fuels (e.g. natural gas Combined Heat and Power (CHP)). Highlight that LDCs may continue to develop and offer programs which provide incentives for behind the meter generation (BMG) projects using renewable energy generation, including projects coupled with energy storage.

In Front of the Meter Conservation: Highlight the benefits of IFMC technologies. Announce that Ontario will allow LDCs to count electricity savings from IFMC projects toward their CDM targets, and that OEB will report back with an approach to encourage LDCs to pursue energy efficiency on the distribution system.

Conservation Program Alignment: Emphasize that IESO will partner with MOECC to achieve efficiencies in program delivery, and improve access, convenience and choice. Direct the IESO to report back on opportunities to align CFF programs with new programs/initiatives established through the Green Ontario Fund.

Enhancing our Commitment to Conservation (con't)

Initiative

Conservation Education/Awareness: Re-affirm commitment to improving public energy literacy; Highlight government support for Ontario EcoSchools.

Work with partner agencies to continue developing public education tools to improve energy literacy, like emPOWERme.

Recast the value of conservation to include system benefits in the 2017 LTEP and in future marketing and communications.

Smart Thermostats: ENERGY will work with IESO to align smart thermostat incentives across the province. Reference Minster's amending direction to IESO for Green Ontario Fund (expected to be issued before LTEP).

Investor Confidence Project: Highlight that Ontario is continuing to explore ways to increased access to financing for energy efficiency projects and is supporting the MaRS Advanced Energy Centre in piloting the Investor Confidence Project in Ontario and exploring how it can be adapted for the Canadian market.

Reaffirming Commitment to Advancing Energy Efficiency Standards: Re-affirm 2013 LTEP commitment to regularly updating Ontario's efficiency regulation with enhanced efficiency standards to further reduce energy consumption and GHG emissions. Highlight collaboration with other provinces and CCAP alignment.

Implementing Green Button Province wide: LTEP to reaffirm commitment to Green Button and announce government's intent to bring forward legislation to mandate Green Button for electricity and natural gas utilities.

Enhancing Commitment to Conservation (con't)

Initiative

Large Building Energy and Water Reporting and Benchmarking: Highlight the introduction of an Energy and Water Reporting and Benchmarking (EWRB) initiative for large private sector buildings in Ontario, beginning July 1, 2018.

Aligning BPS Reporting with EWRB: ENERGY will examine updating Broader Public Sector (BPS) reporting requirements under O. Reg. 397/11 to align more closely with O. Reg. 20/17, including migration to Portfolio Manager for reporting of energy, water and GHG emissions.

Support Ontario's Climate Change Strategy

Initiative

Profile adaptation initiatives: Profile the extensive adaptation and resilience activities continuing, underway and completed by Ontario energy agencies and market participants.

Enhance adaptation capacity: Enhance adaptation activities through knowledge sharing, vulnerability assessments and regulatory reform.

CCAP initiatives: Continue working with MOECC and other ministries on initiatives from CCAP related to energy.

Energy Accessibility

Initiative

Enhancing Utility Performance: Require the OEB to enhance tools related to improving LDC performance, efficiency, and productivity, including potential compensation for consumers when standards are not met.

Modernized Regulatory Process: Require the OEB to review its regulatory requirements to ensure that costs/burden to LDCs are minimized and regulatory processes operate most efficiently.

Regulation of Sub-Metering: OEB to assess whether Unit Sub-Meter Providers (USMPs) should be further regulated, including possible rate regulation. Informed by the findings of the OEB's study, actions could range from requiring USMPs to file a summary of their various customer fees/charges to enable ongoing monitoring by the OEB, to full regulation of USMP rates by the OEB.

Natural Gas expansion: Support natural gas expansion noting the OEB decision and MOI funding, while recognizing that natural gas will not be available in every corner of the province.

**Note that language for inclusion in LTEP and Implementation Directive is under discussion with OEB*

Innovation

Initiative

Grid Modernization: Create the environment to optimize smart grid investments and modernize the distribution sector. The OEB could be directed to require modernization plans from LDCs during rate filings.

Storage Opportunities: The Ministry is making regulatory changes to update rules that create unfair barriers to storage technology. The OEB and IESO will be directed to address other regulatory and market barriers, as well as rules that prevent utilities from capturing the full value of storage.

Electric Mobility: The Ministry / OEB will remove the barriers for utilities to provide smart charging as a service to better manage these impacts and avoid costly system upgrades. The Ministry will work with partners to share data where possible and coordinate activities to minimize these impacts and potentially enable utilities to provide more services to customers with EVs.

Profiling Trade Supports: highlight the Ministry's support for energy companies to reach new markets (e.g., producing market intelligence, participating in energy missions led by the Ministry of International Trade and promoting Ontario's technical expertise at international forums)

Nuclear Innovations: highlight Ontario's continued interest in nuclear innovation which includes monitoring and researching the evolving energy landscape as it relates to new technologies and opportunities to support Ontario's nuclear industry.

Next Steps

Next Steps

- The Ministry will continue to brief Premier's Office bi-weekly on specific LTEP initiatives and policy decision points.
- The Ministry continues to work with the LTEP writer on the chapters highlighting the initiatives in this deck.
- The Ministry will begin preparing the Cabinet submission with these initiatives. The Ministry is targeting the July 26th Cabinet meeting for LTEP approval.