

**2017 LTEP
PO Edits Tracker**

Lead Division	Chapter	Page #	PO Proposed Change / Comment	Accept/Reject	Edits made to LTEP language/ Proposed Counter Edit
All	Exec Summary	3-7	The bullets are fairly technical. Will there be a plain language edit?	Accept	We are pulling together a high level summary of each chapter (short paragraph) as an intro to the technical bullets.
ESP	General		Capacity Auction Language: Need to make language consistent throughout document re: low carbon.	Accept	Language can be made consistent, pending any further updates from MO on discussions with PO on this item.
CRED	1	12	Affordability Fund: Need to explain that this is on top of all other existing conservation programs to help people save money, otherwise it sounds it's all we're doing.	Accept	Proposed Addition (in red) Ontario offers a suite of conservation and energy efficiency programs that can help customers manage their energy usage and reduce their costs over the long-term. The Province has recently taken steps to improve the availability of programs so that all Ontarians can take advantage of conservation opportunities (see Chapter 5). Among these, the government has launched an The Affordability Fund to helps those Ontarians not eligible for low-income conservation programs and who have a need for financial assistance to improve the energy efficiency of their homes. The fund is expected to pay for the installation of household improvements such as energy-saving LED light bulbs, power bars, better insulation, and energy efficient window air conditioners and refrigerators. The Affordability Fund is administered by an independent trust that distributes funds to the electricity distributors that apply. Distributors, working with community partners, are in the best position to provide energy efficiency improvements to consumers in need of assistance.
ESP	1	13-14	Existing Help for Business and Industry: “Ontario will continue to explore innovative ways to provide assistance to these mid-sized consumers, while always striving to increase system efficiency. The Province will continue to engage with businesses and industry to explore options that provide them with support for electricity costs and meet communities’ priorities for economic development.”	Accept	Proposed Addition In addition to these measures, Ontario is looking for new ways to provide electricity rate assistance to consumers that are too large to be eligible for the OEB’s Regulated Price Plan (RPP) and too small for the ICI program. For example, the The government and the Ontario Energy Board (OEB) is are working together on potential approaches to regulatory changes, including how considering changes to the way the GA is charged to these consumers, also

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			Are we sure enough that we can do something on this to create that expectation in the document?		known as non-RPP Class B consumers. For these consumers, the GA is a fixed monthly charge that is the same regardless of the time that they consume electricity. A GA charge that varies with time of use would lower prices for some Class B consumers and encourage more efficient consumption. Ontario will continue to explore innovative ways to provide assistance to these mid-sized consumers, while always striving to increase system efficiency. The Province will continue to engage with businesses to explore options that provide them with support for electricity costs and meet communities' priorities for economic development to reduce costs for these customers. The Ministry of Energy is collaborating with the Ontario Chamber of Commerce to raise awareness about energy efficiency and savings programs available for small and medium businesses.
ESP	2	18?	The Need for Flexibility: The market renewal section is not very clear what we're saying re: climate and environmental attributes because it comes up in a few different ways. Need a consistent statement. (PO to discuss with MO further and pass along further context).	Pending	Need further direction from MO/PO.
ESP	2	23	Influence of the Carbon Market (third paragraph): Change "Consumers pay the carbon cost...." to "the price of fossil fuels such as natural gas, gasoline, diesel and propane will include a carbon cost as a result of the cap and trade program"; also add sentence about why we're doing cap and trade – most cost-effective way to reduce emissions. (PO says PO comms has lots of language on this, let DMO know if we need to collect this for you).	Accept	Proposed Addition On January 1, 2017, Ontario implemented a cap and trade program. The cap and trade program is a flexible, market-based program that will be a cornerstone in Ontario's fight against climate change, and is the most cost-effective way of achieving reductions in greenhouse gas (GHG) emissions. Cap and trade will increase the cost of fossil fuels based on their carbon intensity, but and will also influence how Ontario plans the province's energy supply and achieves cost-effective reductions in greenhouse gas (GHG) emissions. Fossil-fuelled generators must now account for the GHG emissions they produce when burning fossil fuels to generate electricity. This carbon cost accounts for part of the price of the electricity they offer into the wholesale market, which increases the relative competitiveness of non-emitting

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					electricity generation and imports of clean energy from neighbouring jurisdictions. Consumers pay the carbon cost of fossil fuels such as natural gas, gasoline, diesel, and propane because of cap and trade. The price of fossil fuels such as natural gas, gasoline, diesel, and propane will include a carbon cost as a result of the cap and trade program. The Ontario Energy Board (OEB) has to approve the costs that regulated natural gas utilities incur when they comply with cap and trade, including the cost of acquiring emission allowances. These costs are then folded into the rates charged to their customers. Natural gas utilities that are not regulated by the OEB and large facilities that must independently comply with cap and trade will decide on their own how to manage their compliance costs.
ESP	2	24	Influence of the Carbon Market: Need to include sentence on money from carbon market all being reinvested in programs to help people and businesses reduce GHGs and save money.	Accept	Proposed Addition On January 1, 2017, Ontario implemented a cap and trade program. The cap and trade program is a flexible, market-based program that will be a cornerstone in Ontario's fight against climate change, and is the most cost-effective way of achieving reductions in greenhouse gas (GHG) emissions. In addition, all proceeds from the cap and trade program will be used to fund actions to reduce GHG emissions, such as supporting Ontarians in shifting away from fossil fuels and investing in emerging clean technologies.
ESP	2	25	Natural Gas: Need to tone this section down a bit to not create assumption that status quo will continue on natural gas given we need to target QC or other options to decrease it	Reject	All cost data in the modules will be based on the status quo outlook which is the top of the emissions range. Any initiatives to lower GHGs will add cost to the system, and would have to be reflected in the modules.
ESP	2	25	Refurbishing Nuclear: Suggest scaling back the refurb section because there's lots of unnecessary stuff in it and it's unbalanced with every other supply type ie why is it LTEP's role to talk about what Bruce Power is doing with local community? We don't do that for any other companies. Will storage be upset about not being mentioned as a supply source?	Accept	Remove reference to Bruce Power economic development initiative; however, remaining text for the refurbishing nuclear section is consistently presented for Darlington and Bruce (i.e., reporting on progress since 2013 LTEP, jobs/GDP impact, managing risks/oversight) and in line with existing communications. Nuclear will be the single largest source of generation in Ontario over the long-term (i.e., around 50%). Bruce Power has begun a Nuclear Economic Development and

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					Innovation Initiative with the County of Bruce to maximize the local economic impact of Bruce Power's \$13-billion investment. This program seeks to ensure there are long-term benefits for the counties of Bruce, Grey and Huron by: • asking suppliers to open offices in Bruce, Grey and Huron counties, and hire local people; and • giving preference to suppliers who generate jobs and economic benefit in Ontario and, where possible, operate close to the Bruce nuclear site. This effort will have spin-off economic benefits for the region, such as the construction of new housing and other facilities needed to accommodate the businesses and workers involved in this long-term project.
CRED	3	34-35	Net Metering: Can we mention Oxford County specifically regarding virtual net metering or providing a text box on what they're trying to do? Additional comment from MO briefing: Page 4 edit to "Net Metering". Add in a case study on Oxford County that is more general (not specific to virtual net metering).	Accept	Proposed Addition: Oxford County Call-Out Box "In 2015 Oxford County committed to getting 100% of its energy demand from renewable sources by 2050. To achieve this ambitious target Oxford County has developed a 100% Renewable Energy Plan and is investigating innovative technologies like renewable energy, energy storage and microgrids. Ontario's Long-Term Energy Plan supports communities like Oxford County in achieving their community sustainability goals."
SNAP	3	36	Energy Storage (last paragraph): Isn't this what we also said in 2013? Can we just do it this fall instead of making another commitment? They won't take it seriously.	Accept	Proposed addition (in red) The following language is proposed to show progress from the last LTEP. Further language has also been added to link proposals in the "Barriers to Innovation" section directly to energy storage: A March 2016 study by the IESO found that energy storage facilities can provide many of the services that are needed to ensure the electricity system in Ontario operates reliably. The Province also commissioned Essex Energy to study the benefits of storage for distribution networks. The study found that energy storage can

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					provide many benefits, including cost reduction, for larger consumers. Customer-connected energy storage could also provide benefits to the grid, particularly if the LDC partners with these customers to share both the costs and benefits. However, as discussed in the Barriers to Innovation section later in this chapter, the rules are not clear about how these partnerships could work. The Government will move forward with its agencies to provide the right environment for LDCs and customers to partner on storage where it makes sense for both parties. Indeed, the unique aspects of energy storage come into conflict with some of the rules governing the electricity system. We were beginning to understand these challenges in the previous LTEP, and since that time have been engaging with agencies and the energy storage industry to target the barriers that unfairly disadvantage this technology. The Province has now identified these market and regulatory barriers, and is moving forward will propose with updates to its regulations on a priority basis to address them. Concurrently, and it is directing-seeking support from the IESO and OEB to examine take similar steps with their respective codes and rules that may inhibit the cost-effective development of energy storage that where it can provides value to customers and the electricity system.
CRED	5		HERD – Need to reference that this is still being worked on in conservation chapter.	Accept	Proposed addition (in red) Starting July 1, 2018, and phased in over three years, owners of large commercial, multi-unit residential and some industrial buildings will be required to annually report their buildings' use of energy and water and their GHG emissions to the Province. Some of that data will be posted on Ontario's Open Data website every year, so that owners can compare the energy and water usage of their buildings with that of similar facilities, and identify where improvements can be made. The Climate Change Action Plan envisions providing free energy audits for pre-sale homes in order to include energy ratings in real

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					estate listings. The province is examining options to deliver a Home Energy Rating and Disclosure program that would improve customer awareness by allowing homebuyers to compare homes by energy rating and encourage uptake of retrofit incentive programs.
CRED	5	57	Demand Response: Proposed Change 1: DR section does not yet reflect conversation with Atel. (PO is going to discuss with MO and provide more context). PO had asked to include a graphic on how we're surpassing our targets. Proposed Change 2: Update: Remove reference to target.	Partially Accept proposed change 1 – providing text box as an alternative; Accept proposed change 2	Proposed Change 1 (Chapter 5, Demand Response section) New Text Box: Demand Response in Ontario Today <i>Ontario has a number of initiatives that contribute towards its demand response capacity. These include the Industrial Conservation Initiative, demand response auctions, demand response pilots and time-of-use pricing. In 2015, demand response resources amounted to about 1,750 MW which is over 20% higher than what was projected in the 2013 LTEP</i> Rationale for Text Box: - ENERGY (and IESO) staff recommend against including a graphic showing forecasted DR targets since the graphic would not align with LTEP modules. - ENERGY (and IESO) recommend including the text box above as an alternative. - Data is Based on data presented in the OPO (page 3) and LTEP module 2 (slide 21) Proposed Change 2 Instead of pursuing a capacity target, tTo further increase and develop demand response, the Province will work with the IESO to evolve the demand response auctions to the technology-neutral capacity auction, where demand response resources can grow by competing directly with traditional other generation resources. Demand response capacity realized each year will depend on system needs and the competitiveness of demand response with other

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					resources, and other new and emerging technologies.
ESP	6	67-68	Building on a Clean Electricity System: Need to be more explicit that we will look for ways to hold emissions flat or decrease, as discussed, using QC or other options, so that we aim for the lower end of the wedge not higher end.	Accept	Proposed Addition About 90 per cent of the electricity used in Ontario in 2016 was free of GHG emissions, generated from sources such as water, nuclear, wind, solar and bioenergy. Our investments in these types of clean generation sources, along with the elimination of coal-fired electricity generation, have significantly reduced GHG emissions in the province. Thanks to these investments, the province's electricity sector currently accounts for only about two two per cent of Ontario's total GHG emissions on a forecast basis and emissions in 2017 are forecast to be more than 80 per cent below 1990 levels. As seen in figure X below, emissions are expected to remain well below historical levels and to be relatively flat over the planning period. We will continue to look for ways to keep GHG emissions in the electricity sector low, and work with carbon-free market participants to meet the province's emissions targets.
Second Round From PO					
CRED	2	24	Renewable Energy: Contracts for over 4,800 megawatts (MW) of wind energy, 2,100 MW of solar energy, and 1,200 MW of hydroelectric generation will expire between 2026 and 2035, with most expiring after 2030. While wind and solar contracts last for 20 years, and hydroelectric contracts for 40 years, wind turbines and photovoltaic panels are often able to still generate electricity after their contracts expire and we know from experience that hydroelectric facilities can operate for as long as a century. Due to the substantial decline in the cost of wind and solar technologies over the last decade, renewables are increasingly competitive with conventional energy sources and will continue to play a key role in helping	Reject	Rationale: ENERGY previously decided not to pursue IESO contract amendments to enable "technical upgrades" (i.e. uprate technologies), due to increased impact on electricity ratepayers. ENERGY staff also noted that it would be challenging to develop a baseline that distinguishes between electricity generation from the existing facility and incremental generation due to the upgrade; this would be especially the case for contracts with less operating history. ENERGY staff analysis also concluded that upgrade technology may have implications for any or all of the following: • A project's existing connection to the grid;

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			Ontario meet its climate change goals. As part of the IESO's ongoing work to find efficiencies and the best value for the ratepayer, the IESO can maximize the existing fleet of renewable assets by adapting contracts to take advantage of uprate technologies, where cost savings can be demonstrated. Additional comment from MO briefing: Page 7 edit to "Renewable Energy". Tone down the language of this new addition from PO (red font above).		• Connection availability for other IESO procurements in the area; • Curtailment of other projects in the area; • Potential impact on existing project approvals (i.e. Renewable Energy Approvals); and • Result in additional public consultation requirement. ENERGY staff do not recommend specifically identifying uprate technologies in the LTEP text, since LTEP is not proposing specific initiatives to support these. Proponents of uprate technologies could consider examining opportunities under Market Renewal.
CRED	2	25	Wind and Solar: In many cases, new or more efficient hardware and software uprate technologies technology can be added to upgrade the province's wind and solar energy facilities so they can continue operating, increase their output, and provide additional system benefits.	Reject	Rationale: ENERGY staff do not recommend specifically identifying hardware and software uprate technologies in the LTEP text, since LTEP is not proposing specific initiatives to support these. The discussion of technologies here has been kept intentionally broad, in order to cover updates to projects at the end of contract life (e.g. swapping out older solar modules for newer ones, or replacing wind turbine blades), updates during mid-contract to increase output (e.g. software/hardware uprates), and adding storage to an existing wind or solar project to help provide a more reliable power supply. ENERGY staff don't recommend getting into details of these technologies, in order to avoid raising expectations from specific technology proponents, who may expect specific initiatives targeted at their technology upgrades.
ESP	2	18			

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			To meet our long-term needs, the Independent Electricity System Operator (IESO) has begun a Market Renewal initiative to redesign the province's electricity markets. This undertaking is expected to save up to \$5.2 billion between 2021 and 2030^[1] and forms a key component of Ontario's plan to bring down the cost of electricity. The Market Renewal initiative consists of three work streams: energy, operability, and capacity. The IESO will continue its work on the design of mechanisms under these initiatives, in order to maximize the benefits to the system and ultimately fulfil IESO's mandate of ensuring reliability and affordability. When new supply needs are identified, the IESO would use competitive mechanisms to procure new supply resources. An example of a market-based mechanism that could be used in an incremental capacity auction. The incremental capacity required to meet Ontario's forecasted requirements for supply and resource adequacy would be in addition to its already contracted resources. Upgrades and expansions to existing generators, demand response providers, and importers and emerging new technologies could all participate in the auction, with the most cost-effective resources winning out. The incremental capacity auction would incorporate services that provide flexibility, reliability and ancillary system benefits into its design to help ensure that all resources can compete on a level playing field.	Accept	
CRED	3	34	Net Metering: Can we be more specific about VNM timelines and pilots? Additional comment from MO briefing:	Partial Accept	Recommended Edit: Provide general timing for net metering Part 2 legislative and regulatory amendments. Do not comment on timing of virtual net metering demonstration projects. Proposed Addition:

^[1] Brattle Group, prepared for the IESO, A Benefits Case Assessment of the Market Renewal Project (2017)

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			Page 8 edit to “Net Metering”. Ensure we have language in the LTEP about legislative changes to net metering.		The Province will also propose legislative and regulatory amendments changes that would enable the deployment of demonstration projects for virtual net metering, and work with the Independent Electricity System Operator (IESO) to support these demonstration projects. Virtual net metering could allow Ontarians who may not be able to install their own renewable energy system to participate in renewable energy projects located away from their homes or businesses, and still receive a credit offsetting their electricity bill. It could also support the siting of renewable generation where the electricity is most needed and valuable on the distribution grid. The goal of these demonstration projects would be to better understand the impacts of virtual net metering and guide future policy decisions on net metering. Proposed legislative amendments are expected to be brought forward in fall 2017. Pending passage of legislative amendments, regulatory changes would be made in 2018. Taken together, these proposed enhancements would provide a platform for future innovation in clean, distributed energy and put the province at the forefront of renewable energy integration in Canada. Rationale: Energy is targeting an in effect date for Part 2 net metering updates (third party ownership, enable virtual net metering demonstration projects) of July 1, 2018. This target in effect date has not been communicated publicly. Following Legislative updates tracking to Cabinet for September 25, 2017, proposed Regulatory amendments will be posted to the Environmental Registry shortly thereafter (early Fall 2017). Energy anticipates communicating the July 1, 2018 target in effect date for Part 2 Net Metering legislative and regulatory updates in the EBR posting. This is consistent with the approach taken for Part 1 Net Metering updates, which were also communicated in an EBR posting. Recommend keeping timing general, as drafted above in red. The Smart Distributed Generation demonstration program is

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					expected to be the venue for virtual net metering demonstration projects. The program will be announced in LTEP and has not yet been communicated publicly. It is expected that the IESO will communicate greater detail on program development and delivery timelines in the Implementation Plan. The IESO would need to consider all other deliverables communicated in LTEP to provide details on program delivery timelines. Also, the Part 2 Net Metering legislative and regulatory updates must be in effect (target July 1, 2018) prior to the launch of the Smart Distributed Generation demonstration program to allow for third party participation and virtual net metering demonstration projects. Recommend not commenting on the specific timing of the Smart Distributed Generation demonstration program in LTEP.
SNAP	3	36	Energy Storage: Energy storage facilities can provide a wide range of services needed to reliably operate the power system in Ontario including: regulation, voltage control, operating reserve, and flexibility. The IESO should ensure that storage technologies can compete in procurements for these services.	Partial Accept	Proposed Edit: Add at the end of the first paragraph, which ends with “sending out electricity when needed,” add the following: Energy storage can offer benefits throughout the grid, from large-scale facilities that can reduce the need to build new supply, import electricity, or use GHG-emitting generation sources, to smaller-scale devices that can provide backup services to buildings.
SNAP	Four 3	TBD 35	Add reference about incentivising LDCs to find non-wires solutions into the LDC sector. Currently there is language in the regional planning section, but can we also add to this chapter?	Partial Accept	Accept the need to highlight the need to incentive LDCs to find non-wires solutions. Recommend that this citation is placed in Chapter 3 (Innovation). Chapter 3 is focused on system innovation, while chapter 4 is focused on LDC business model innovation. Although both chapters propose regulatory initiatives that promote customer choice and sector efficiencies, the treatment of non-wires solutions may be more appropriate in the earlier chapter. As well, chapter 3 already mentions non-wires alternatives. <i>Recommended change:</i> Chapter 3 After the bullet

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					- the use of innovative, non-wires solutions that will, among other things, allow utilities to manage their systems better and encourage customer choice; ADD: - the regulatory treatment of LDC capital and operational expenditures, which can inhibit the uptake of these non-wires solutions; <i>Alternative change: Chapter 4</i> Add a paragraph on encouraging non-wires solutions through reviewing the regulatory treatment of LDC expenditures in the “changing business models” section, after “To meet the challenges of the future, LDCs may need to be able to adopt more flexible and innovative approaches to service delivery than have been allowed in the past,” ADD: “Non-wires alternatives represent an opportunity for LDCs to adopt new approaches to how they deliver electricity and conduct business. While traditional investments are capital-intensive, non-wires alternatives often involve expenditures that the OEB considers “operational” in nature. The current regulatory framework inherently favours LDCs capital investments over operational investments, reducing the incentive for utilities to explore these innovative solutions. As part of its review of barriers to innovation (Chapter 3), the Ministry will look to the OEB for ways to appropriately address the treatment of LDC expenditures to ensure cost-effective outcomes for ratepayers.”
SNAP	8	97	Ring of Fire: Update the positioning of this language. MO is reaching out to MNDM.		Pending MO receiving information from MNDM.
ESP	8	99	Setting Standards for Pipelines: List all of the principles – specifically referencing climate change.	Accept	Almost all of Ontario’s oil and natural gas is delivered from outside the province by interprovincial and international pipelines. These pipelines are under federal jurisdiction and regulated by the National Energy Board (NEB). The 2013 Long-Term Energy Plan

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					outlined a set of principles that Ontario will use to evaluate oil and natural gas pipelines, such as TransCanada's proposed Energy East Pipeline. In November 2014, Ontario and Quebec agreed on the following seven principles for pipeline reviews: • Pipelines must meet the highest available technical standards for public safety and environmental protection; • Pipelines must have world-leading contingency planning and emergency response programs; • Proponents and governments must fulfill their duty to consult obligations with Indigenous communities; • Local municipalities must be consulted; • Projects should provide demonstrable economic benefits and opportunities to the people of Ontario, over both the short and long term; • Economic and environmental risks and responsibilities, including remediation, should be borne exclusively by the pipeline companies, who must also provide financial assurance demonstrating their capability to respond to leaks and spills; and • GHG emissions and the interests of natural gas consumers must be taken into account.
ESP / SNAP	1		Ensure all OFHP language is consistent with original language.	Accept	Confirmed that language is consistent with original OFHP language.