

Regional Planning Process Review – Feedback Form

Webinar Date: March 13, 2020

<u>Date Submitted:</u> <i>2020/03/27</i>	<u>Feedback Provided By:</u> Organization: EDF Renewables Main Contact: David Thornton, Manager, Regulatory and Public Affairs Email: [REDACTED]
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Following the March 13, 2020 Regional Planning Process Review Straw Man Design webinar, the Independent Electricity System Operator (IESO) is seeking feedback from participants on the recommendations and proposed actions for enhancements to the regional planning process identified in the Straw Man Design. The presentation and Straw Man Design document can be accessed from the stakeholder engagement [webpage](#) for this initiative.

Please submit feedback to engagement@ieso.ca using this feedback form by March 27, 2020. If you wish to provide confidential feedback, please submit as a separate feedback form, marked “Confidential”. Otherwise, to promote transparency, this feedback will be posted on the engagement webpage unless otherwise requested by the sender.

Feedback provided by this deadline will be considered in the development of the Regional Planning Process Review Final Report, which is expected to be released by the end of 2020.

Part 1: Recommendations for improvements to process efficiency and flexibility

Questions

Are there any gaps or deficiencies in the regional planning process that these recommendations do not address?

- EDF supports enhancing activities occurring between planning cycles by the recommendation of the Technical Working Group meeting annually; however, **the composition of the current Technical Working Groups are flawed and should be addressed**. First, there are no members who represent the interests of large customers (e.g., Transmission-connected customers or Class A customers) or members who represent Non-Wires Solutions (NWS). Without representation alternative solutions and issues cannot be discussed in detail. Second, there is a conflict of interest without their membership since the majority of members (i.e., transmitters and LDCs) have a financial incentive to promote wires solutions. Without a framework for their cost recovery of NWS, the regular meetings will not meet the objective of cost-effective and scalable for customers.
- Standardizing load forecast development is important. The IESO should work to ensure that common assumptions, data inputs and methodology (where appropriate) should align with other load forecasting undertaking of the IESO (e.g., Reliability Outlook, Annual Planning Outlook). The IESO should clearly articulate where differences are between different forecasts and provide reasoning to stakeholders why different approaches are used. In particular, the IESO intends in future APOs to forecast zonal demand, which must align with regional planning processes to allow coordination of investments. Many NWS are developed to address multiple needs of the power system. If bulk and regional load forecasts are not aligned, it is difficult to determine how much of an opportunity it is for a NWS. EDF recommends that in the long-term the IESO should have regular and standardized load forecasts that can be summed up to a bulk system forecast. A good reference is the AESO's long-term outlook that provides regional forecasts. **EDF supports the recommendation of a load forecast update on an annual basis so that investment and marketing activities can monitor the development of the region.**
- Under the "Enhancing Engagement & Transparency", the IESO states that the public engagement occurs during the Scoping Assessment stage where the IESO has determine how each need will be addressed. There is a risk that engaging with stakeholder after determining solutions could lead to bias in final solution selection. Further, stakeholders are not given the opportunity to review and critique the need. Further, stakeholders have less of an opportunity to develop external solutions. **The IESO should move stakeholder engagement earlier and present to stakeholders the Needs Assessment for a region.** The Needs Assessments is the foundation of any regional power system investment and stakeholders should be given the opportunity to clearly understand the need drivers before assessing potential solutions and investments.

- Many issues in the IESO regional planning process do not neatly fall within the IESO or OEB mandates. Instead, issues straddle the mandates of both government agencies and resolution of the issues require coordination on policy and procedures. With respect to cost allocation, **EDF believes that clear and consistent guidance from both the IESO and OEB is paramount to supporting NWS and fairly recognizing the full system benefits they can provide. To that end, the IESO and OEB should establish a joint working group to tackle issues that are within both agency's mandate.** There should be a terms of reference, set timelines, clear objectives and recommendation action plan. There are a large number of consultations and stakeholder engagements underway, clarity on which issues are the responsibility of different groups is difficult. Amalgamating a number of issues under a single joint working group would increase the efficiency in addressing issues and support more effective planning for the Ontario power system.
- Finally, access to clear and consistent data is an important component of any planning exercise. **Good data is important for stakeholders, investors and customers to understand the magnitude of the power system need and to determine appropriate solutions to address the identified issues.** For example, energy storage resources are first and foremost utilization tools for the electricity system. They can help smooth load shapes, increase the efficiency of the power system and help maintain reliability during outage events. To properly assess the attributes and characteristic needed for an energy storage resource in a regional power system, hourly load shapes are required. Optimally, a 8760 hour load shape would be provided; however, seasonal (e.g., summer, winter, shoulder) typical hourly curves would be an excellent starting point. The information would be used to determine the appropriate capacity and duration of the energy storage resource. Further, the stress-testing of the hourly curve would help determine how the energy storage resource would manage variations in hourly curve. A starting point would be to provide historic hourly load shapes by station or transfer point within the power system. Assumptions for changes to future load shapes (e.g., impact of greenhouse gases) should be provided and forecast load shapes provided. The future load shapes could be a specific planning year (e.g., 2030). Overall, more information should be shared widely for analysis, should be in a readable data files (e.g., csv), and should clearly state what assumptions, methodology and inputs were used.
- One of the key benefits of energy storage resources is the adaptability to an uncertain future. Traditional wires investments have an operating life of 40-50 years. Decisions to install wires solution represent a financial commitment by rate-payers for that time period and can result in potential stranded costs if load growth or system need does not materialize as expected. The

	<p>IESO should provide a summary of the methodology to compare the rate-payer impact of operating lives for different options to address power system needs. The methodology should discuss the cost impact under different outlooks for the system. For example, if load growth is lower than expected, how much cost would be borne but rate-payers compared to options that can manage lower load growth more effectively. From a scalability view point, the methodology should describe how the regional plan is maintaining flexibility to adjust to uncertain outcomes. A summary of the methodology would help energy storage resources designs to have the maximum value under future scenarios for a region</p>
<p>Will the recommendations identified achieve the objectives of streamlining the regional planning process and improving coordination with other, related planning processes?</p>	<ul style="list-style-type: none"> • EDF believes the recommendations will support the objectives of streamlining the regional planning process. The comments provided above are adjustments or additions to the proposed recommendations and will hopefully be considered as part of the final regional planning process update. EDF believes the overall plan for the enhancement of the Ontario planning process is sound, but that further action is required to improve coordination between the IESO's various planning processes (e.g., APO, Reliability Outlook, Regional Planning) as well as other planning processes (e.g., Distribution System Plans).
<p>Part 2: Recommendations to develop a long-term approach to replacing transmission assets at end of life</p>	
<p>Questions</p>	<p>Feedback</p>
<p>Will the recommendations identified achieve the objectives of establishing a coordinated, cost-effective, long-term approach to replacing transmission assets at end-of-life?</p>	<ul style="list-style-type: none"> • The IESO recommends that on an annual basis transmission asset owners (including applicable distributors) provide a “long list” of transmission assets nearing end-of-life to the IESO. For NWS solutions to be effective, a clear understanding of the opportunity with adequate lead time to develop a solution is required. Therefore, EDF recommends that the long list be shared with stakeholders so that they can better anticipate planning needs and develop solutions that best meet community needs. • The IESO indicated that there may be concerns with sharing sensitive information. Other jurisdictions have established Critical Energy Infrastructure Information (CEII) processes that allow appropriate stakeholders access to detailed planning information. EDF recommends that the IESO explore a CEII process to allow sharing of sensitive information
<p>Will the recommendations identified provide the necessary asset replacement information for consideration in the bulk and regional transmission planning processes?</p>	<p>No comment</p>
<p>Part 3: Recommendations to identify barriers to the implementation of cost-effective non-wires alternatives and options to address barriers</p>	

Questions

Will the recommendations identified adequately address barriers to consideration of cost-effective non-wires alternatives within the scope of regional planning activities that the IESO is responsible for?

- The costs and rate-payer impacts of traditional wires investments are well known. For NWS, it is important to establish a common understanding of input assumptions for system value modelling. For example, what assumptions did the IESO use for grid-scale energy storage in the recent past?. Assumptions could include cost, capacity, energy capability, operating strategy (i.e., how was the energy storage resource cycled), and implementation phases (i.e., how much capacity was added in each year). In addition, grid connection location is an important consideration in planning the power system. The regional planning process should provide a summary of potential wires expansion to meet system need. The same analysis is not provided NWS, therefore it is difficult to determine if the option is adequately assessed.
- In addition to input assumptions for planning purposes (see above), a simplistic financial model should be shared with stakeholders for NWSs. The simplistic financial model could include capital and O&M cost estimates, cost of capital assumptions and operating life expectations. The objective of the model is to determine the annual funding requirements to support the NWSs and potentially what would ultimately be borne by rate-payers (note that rate-payer costs could be a portion of NWSs costs if additional market revenues are included, this is discussed later in this letter).
- Generally, NWSs rate-payer impact assessments can be grouped into two categories based on who bears the merchant risk of additional revenue streams. In both categories, the revenue for providing a reliability product to rate-payers would be recovered from rate-payers as regulated asset/service agreement. That reliability product cost is the value that should be compared to traditional wires investments, not the total revenue the NWS receives.
- The first category is a Net-Revenue Requirement (NRR) approach. Under this approach, the IESO should estimate future additional revenue streams that a NWS could receive in addition to providing the reliability product. The forecast of additional revenue streams could include different market outlooks based on the outcomes of the Annual Planning Outlook and other planning exercises. The IESO would also estimate the revenue required to install and operate the NWS to provide the reliability product for the region in addition to receive additional revenue streams. The cost to rate-payers would be the revenue requirement less the additional revenue streams (i.e., net-revenue requirement). If the NRR was determined by the IESO to be lowest cost option to meet the regional power system needs, the IESO would procure (or support procurement by transmission or distribution network owners) the NWSs under a service agreement to provide the reliability services. The service agreement would provide a contract for differences (CfD) between the NRR value and additional revenue received. Actual reliability product payments would be based on actual additional revenue streams received.

The risk of constructing and operating the facility would be borne by the NWA entity. The merchant risk of revenue streams would be borne by rate-payers. The total cost paid by rate-payers would be fixed; therefore, the risk of extreme cost overruns would be limited. See table below providing an example of the basecase that would be used for planning purposes in addition to three scenarios of actuals to demonstrate the variation of payment by rate-payers. Note that scenario 3 would result in rate-payers receiving a payment from the NWA since additional revenue streams exceeded the NRR.\

Net-Revenue Requirement (NRR)	Basecase	Scenario 1: Less Additional Revenue	Scenario 2: More Additional Revenue	Scenario 3: Excess Additional Revenue
Revenue requirement	100	100	100	100
Regional Reliability Payment	60	80	30	-20
Additional Revenue Services	40	20	70	120
Revenue to ESR from Rate-Payers	60	80	30	-20
Revenue to ESR total	100	100	100	100

- The second category would be a fixed reliability payment through a competitive procurement. Under this approach, the IESO would perform the same analysis as the NRR approach to assess the reasonableness of the option to meet regional planning needs. If the NWS option is determined to be preferred, the IESO would seek to procure the NWS under a service agreement that would pay a fixed price for the provision of the reliability product. Additional revenue streams would be fully captured by the NWSs entity with risk/opportunity borne by the entity. The cost to rate-payers would therefore be fixed, with limited downside or upside from additional revenue streams. In addition, the IESO’s forecast of additional revenue streams would be less important in determining future cost to rate-payers since the procurement would produce a market price for the reliability product services based on the outlook from all NWS proponents. A downside is that NWSs proponents would likely offer a higher price for the fixed payment compared to the NRR to reflect the cost of bearing the additional revenue stream risk. Further, if additional revenue comes in higher than expected the NWS entity would not be obligated to share any of the revenue with rate-payers. This approach would offer a fair and equal comparison of costs to rate-payers between NWS and traditional wires solutions while appropriately reflecting the potential cost savings of value stacking by the NWS. See table below for example of the fixed cost baseline and additional actual scenarios to demonstrate the cost to rate-payers. Note that payments by rate-payers is fixed but revenue to the NWS varies with additional revenue streams.

	Fixed Cost	Basecase	Scenario 1: Less Additional Revenue	Scenario 2: More Additional Revenue	Scenario 3: Excess Additional Revenue
	Revenue requirement	100	100	100	100
	Regional Reliability Payment	70	70	70	70
	Additional Revenue Services	40	20	70	120
	Revenue to ESR from Rate-Payers	70	70	70	70
	Revenue to ESR total	110	90	140	190
With respect to the recommendations identified outside of regional planning that the IESO is not solely responsible for, do the recommendations provide a good starting point to address barriers to implementing non-wires alternatives?	No comment				