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Frank D'Andrea

Vice President, Reliability Standards and Chief Regulatory Officer

BY EMAIL

April 14, 2020

Independent Electricity System Operator
120 Adelaide St. W. #1600
Toronto, ON M5H 1T1

Re: Regional Planning Process Review Straw Man Design

On February 28, 2020, the Independent Electricity System Operator (“IESO”) issued the Straw Man Design of its Regional Planning Process Review (“the Straw Man”). Please see attached the comments of Hydro One Networks Inc. (“Hydro One”) in respect of this matter.

Due to unforeseen circumstances arising from the COVID-19 pandemic, Hydro One was unable to meet the initial submission deadline of March 27, 2020. Hydro One apologizes for the delay in filing these comments and appreciates the IESO’s thoughtful consideration of its feedback.

Please do not hesitate to contact me if you have any further questions regarding this matter.

Sincerely,

ORIGINAL SIGNED BY FRANK D’ANDREA

Frank D’Andrea
Encl.

**Regional Planning Review Process
Hydro One Comments on Straw Man Design Proposal
April 14, 2020**

Background

On February 28, 2020, the Independent Electricity System Operator (IESO) issued its Regional Planning Process Review Straw Man Design (“the Straw Man”). The Straw Man was developed in response to the review of the Regional Planning process that was directed to the IESO and Ontario Energy Board (OEB) in the 2017 Long Term Energy Plan (LTEP) issued by the Ontario government. The IESO was to conduct the initial review of the Regional Planning process and provide recommendations for further consideration by the OEB.

General Comments

In Hydro One’s experience the Regional Planning process developed by the OEB’s Regional Planning Process Advisory Group (RPPAG) and endorsed by the OEB has worked very well which was evident from the surveys conducted after the first cycle of planning. Hydro One supports improvements to process efficiency and flexibility. It is Hydro One’s view that the process has exhibited continuous improvement to date and that the opportunities for improvement are more incremental than revolutionary.

Feedback from the surveys and lessons learned from the first cycle have already been incorporated for the second cycle however, the context for the recommendations in the Straw Man does not appear to reflect these improvements. Prior to proceeding with any further development of detailed recommendations and process documentation, the IESO should update the content of the Straw Man to reflect the changes that have already been made so that stakeholders do not expend time proposing solutions to issues which have already been mitigated.

Accordingly, Hydro One believes that the IESO and OEB should ensure that the final recommendations:

- appropriately balance enhancing the process without making it overly complex and burdensome;
- continue to provide asset owners with the flexibility required to plan, manage and operate their assets; and
- empower asset owners to make the right decisions for the benefit of their customers.

As noted by the IESO, not all of the proposed actions in the Straw Man can be directly implemented by the IESO and would be best addressed through the OEB’s Regional Planning Process Advisory Group (RPPAG). Prior to proceeding with future engagements, Hydro One submits that the IESO should identify which recommendations are being undertaken by the IESO and which will be within the jurisdiction of the OEB. The IESO should be mindful that parties dedicate resources to considering and providing comments and it should not introduce unnecessary duplication of efforts by seeking comments from stakeholders when a separate stakeholder forum at the OEB will be the venue ultimately responsible for developing and approving the recommendations.

Part 1: Recommendations for improvements to process efficiency and flexibility

Hydro One's comments are provided below in respect of the individual recommendations in the Straw Man. Hydro One notes that there have been several improvements implemented during the second cycle of regional planning based on lessons learned which have already yielded improvements. Hydro One has identified some of these improvements in its comments. As noted above, the IESO should update the content of its Straw Man to reflect the changes that have already been made so that stakeholders do not expend time proposing solutions to issues which have already been mitigated.

Recommendation #1: Streamlining Load Forecast Development

Hydro One notes that a new load forecast is not necessarily produced at each stage of the Regional Planning process. For example, the Study Team in the Regional Infrastructure Plan (RIP) stage is only required to review and confirm the load forecast developed as part of the Integration Regional Resource Planning (IRRP) stage. There have been rare examples where a forecast has been updated. Updates have only occurred in multiple phases where there were significant changes in circumstances (e.g. significant incremental load in the Leamington area). Hydro One believes that each phase should conduct a review to determine if a significant change in load forecast is required as the length of time between stages can be lengthy and changing circumstances can result in the advancement or deferral of an investment. The iterations of load forecasting at each phase (Needs Assessment, IRRP, RIP, etc.) serve different purposes and require different levels of detail. Each stage has an important role and is not redundant as indicated by the IESO on slide 31 of the Straw Man.

The IESO has provided three different options to reduce the redundancy and time requirements of forecasting activities. Each option addresses different concerns however, it is not clear that implementing all three will result in the desired objective of increasing efficiency. Hydro One notes that options A and B will increase the up-front burden on the load forecasting process. This effort may not be warranted given that experience so far suggests that comprehensive IRRPs are not required for all regions.¹ In the first cycle, 10 of the 21 planning regions did not undertake the IRRP process because no further regional coordination was required. The requirement for more detailed up-front work on an annual basis across all regions will only benefit the few regions requiring detailed plans at the expense of introducing unnecessary work and detail for stakeholders for the remaining regions.

Option A proposes that "base assumptions and methodologies for load forecasting should be specified by all Technical Working Group members" using agreed-upon templates. Hydro One agrees and notes that Technical Working Group members already review base assumptions and methodologies for load forecasting at the first meeting using standard templates. While Hydro One believes there is potential to arrive at a consensus regarding general assumptions such as the Ontario GDP growth rate, it may not be practical or desirable to require a consensus on methodologies and assumptions for all utilities and across all regional planning Technical Working

¹ In regions where an IRRP is required, the scope of the IRRP is often limited to smaller subset of the region.

Groups. Different utilities have different forecasting methods and assumptions that reflect the specific circumstances of their service territories. The circumstances can even vary for utilities within the same planning region. For example, one participant may represent a service territory with stable or declining load while another may represent a service area experiencing significant and rapid growth. It is important that some flexibility be maintained. As such, Hydro One suggests that discussions regarding load forecast within the Technical Working Group would benefit from greater participation of those who provide the forecasts in each utility.

Hydro One submits that the current template for presenting load forecast information should be reviewed to consider what additional information may be required in light of sector evolution at the distribution level (e.g. distributed energy resources, energy storage, etc.). Additionally, there may be value in including information regarding anticipated development plans/proposals for municipalities within a planning region that have specific and measureable objectives. This information is currently at a high level without any specifics and not universally available to all utilities within a planning region. Undertaking a deeper review of this information for longer-term planning would better ensure that future load within a region is served in the most cost-effective manner, allow for incremental build out of infrastructure to mitigate customer impacts, and afford greater time to identify and consider non-wires solutions.

Option B seeks to “avoid load forecasting three times (during the Needs Assessment, IRRP and RIP) in a single planning cycle.” Hydro One is supportive of this objective where it is feasible. It is worth noting that during the Needs Assessment stage the Study Team does not spend significant time developing load forecasts and instead relies on forecasts already available to LDCs. This helps to identify and review which regions require a detailed analysis. A detailed forecast is only developed in the IRRP phase and has rarely been updated during RIP, to date. Further, Hydro One notes that there is frequently a gap of more than a year between IRRP and RIP. When the length of time between phases is significant, the demographic/economic circumstances can evolve materially from initial forecasts and an update to the load forecast becomes unavoidable. Hence, it is important for the Study Team to review and update as required throughout the planning process.

Option C calls for forecasts to “be monitored and formally reviewed annually”. It is unclear whether this is an additional requirement proposed by the IESO or a formalization of current practices. In the current Regional Planning process, the Study Team reviews the load forecast at different stages of the process to ensure it is consistent with the most recent data and assumptions. Hydro One believes these discussions are appropriate and has no concerns if the IESO is seeking to formalize this existing practice. If the IESO is proposing an incremental annual review for all planning regions, Hydro One has concerns that the recommendation would result in greater burden and reduce process efficiency while adding little benefit from a planning perspective. This concern is heightened if the IESO were to also implement Options A and B which place further up-front burden on participants of the Regional Planning Process.

Recommendation #2: Accelerating and Sizing the Integrated Regional Resources Plan (IRRP)

Hydro One is supportive of this recommendation and notes that the current Regional Planning process already exhibits this flexibility in the scope of IRRP work undertaken based on regional

circumstances. Several of the IRRPs were conducted for a small sub-region within a region. For example, the Brant sub-region in the first cycle and Hamilton sub-region in the second cycle of Regional Planning. Hydro One has already taken steps in the second cycle to expedite the Needs Assessment and Regional Infrastructure Plan (RIP) stages, where possible. These steps include engaging with LDCs and large customers prior to triggering Regional Planning.

Recommendation #3: Streamlining the IRRP and Regional Infrastructure Plan (RIP)

Hydro One supports the objective and notes that there may be opportunities for streamlining the IRRP and RIP stages. Hydro One notes that the Need Assessment Study Team also makes a recommendation when and for which needs IRRP or bulk system studies should be undertaken based on broader regional needs or upstream bulk system impacts. As the Study Team members for Needs Assessment (NA), Scope Assessment (SA), IRRP, and RIP processes are the same, it may be worthwhile to consider whether efficiencies can be gained by shortening the SA or merging the SA with IRRP to make the process efficient.

The current timeline for IRRP is 18 months and RIP is 6 months. Rather than utilizing the current sequential approach proposed in the Straw Man, another alternative may be for Hydro One as a transmitter to start development of RIP in parallel with IRRP after 9 months of IRRP. The first nine months of the IESO led IRRP could determine wires and/or non-wires options. Following this initial determination, the IRRP could continue to develop non-wires options identified while the transmitter led RIP process begins, in parallel, to further develop wires options. This can provide significant efficiency and flexibility to the process.

Recommendation #4: Better Coordinating with Related Processes

Hydro One notes that the recommendation is to develop a better understanding of the scope, interdependencies, and decision-making points of the processes related to regional planning. Given that the initial assessment has not yet been completed, Hydro One has no comments to provide at this time. As noted in Hydro One's general comments, the desire for better coordination should be appropriately balanced against the incremental complexity and regulatory burden that is introduced.

Recommendation #5: Enhancing Regional Planning Engagement and Transparency

Hydro One supports engagement with customers and suggests that the recommendation be extended to include development of criteria for coordinated engagement with the IESO, lead transmitter, regional LDCs and municipalities. Coordinated engagement would ensure continuity from planning to project execution for relevant transmission projects and assist to avoid last minute issues/surprises late in a project's lifecycle. Utilities have significant experience engaging with their customers as part of their day-to-day operations that can be leveraged to enhance the IESO's engagement activities. For example, Hydro One has experienced success in undertaking planning touch points with major customers and LDCs to understand their needs in advance of regional planning as part of its customer communication efforts.

Recommendation #6: Better Considering Cost Allocation

Hydro One agrees that the technical working groups would benefit from a solid understanding of the financial repercussions of their recommendations. However, the Regional Planning process is not the forum to discuss cost allocation or through which any changes to cost allocation are to be determined. That responsibility lies with the OEB. OEB codes are now more specific respecting the allocation of costs for infrastructure projects.² Providing this information as part of the process either at an early stage or through a mechanism outside the process could be informative for participants however, the scope of consideration must be clearly communicated to avoid unproductive discussions. Hydro One suggests that the OEB could consider delivering education material to all stakeholders for better understanding the existing cost responsibility requirements. The Study Team's focus should remain on recommending the best option to address system needs from a planning perspective.

Recommendation #7: Improving Long-Term Planning

Hydro One agrees that a greater long-term outlook to Regional Planning may yield opportunities to more effectively pace investments and mitigate impacts to customers over time. More specifically, the current framework needs to improve to allow transmitters and distributors to incrementally build out their systems to serve areas that have been identified as growth or economic development centers. Currently, a low risk approach is taken where firm commitments need to be obtained from load customers prior to undertaking build plans. While Hydro One understands the desire for firm commitments, this may not always be practical and a flexible approach may result in greater benefits to all customers in the long term. Hydro One acknowledges that such considerations may require regulatory changes that are within the purview of the OEB.

Recommendation #8: Enhancing Activities Between Planning Cycles

See Hydro One's comments regarding Recommendation #1.

Recommendation #9: Clarifying Process Stages and Final Products

No comment.

Part 2: Recommendations to develop a long-term approach to replacing transmission assets at end of life

As discussed above, the Straw Man document does not reflect changes that have already been implemented for the Regional Planning process. Hydro One already shares with regional planning Study Teams any reports related to major high voltage equipment that is expected to reach its end of life (EOL) within 10 years, such as, transformers, lines, and breakers.³ The information is discussed and assessed for "right sizing" by Hydro One along with the regional planning Study Team and the IESO. Hydro One has already removed 5 transformers from service and is planning

² The Distribution System Code and the Transmission System Code.

³ Regional Planning reports (NA, IRRP, RIP) for Toronto Area, Burlington – Nanticoke, Ottawa are some of the examples. Hydro One also provides end of life information in support of any Bulk Planning studies.

to remove a further 12 between 2020 and 2024 because of “right sizing” assessments. With the enhancements to include the information already implemented, Study Teams have consistently met the objectives of establishing a coordinated, cost-effective, long-term approach to replacing transmission assets at end-of-life. Hydro One does not see the need for further changes at this time.

Hydro One does not agree with the IESO’s proposed approach to compiling asset information. The IESO’s proposed “Long List” would have Hydro One, and other lead transmitters, provide a vast amount of information annually with little or no value to the planning process. There is also no consideration of the costs associated with this undertaking and no evidentiary basis that any benefit would be provided. As described in the Straw Man, there does not appear to be a limit to the scope of assets for which data would be provided other than to propose that the list would have a “20-year outlook.” The list is not even limited to the assets serving the regions that are actually undergoing regional planning or expected to undergo bulk planning in the following year.

It is unclear what benefit the expected service life (ESL) of all major transmission asset categories will provide. ESL is a measure based on age. Hydro One does not solely base its replacement decisions on age. It bases those decisions on asset condition which is informed by a myriad of factors including objective testing and equipment performance. Asset deterioration can change significantly beyond 5 years. Hydro One is not aware of any planning assessment which requires EOL or ESL beyond 15 years let alone the 20 years requested by the IESO. As noted in the IESO’s own presentation, a sizable portion of transmission assets in Ontario are operating beyond their ESL which further calls in to question the importance or value of the data that is being sought. The IESO should not be seeking any ESL data beyond 15 years. Hydro One suggests that a pilot planning assessment be carried out to determine if there is any value to collecting such data *before* any onerous data requirements are implemented. Hydro One also suggests that any further decisions regarding the appropriate scope of review for the replacement of transmission assets at EOL within the Regional Planning process would be more appropriately considered within the OEB’s RPPWG.

Part 3: Recommendations to identify barriers to the implementation of cost-effective non-wires alternatives and options to address barriers

Hydro One notes that the majority of the barriers to the implementation of cost-effective non-wires alternatives (NWAs) do not appear to be directly related to the Regional Planning Process. They are related to other areas of the regulatory framework (e.g. participation in the IESO’s markets). The IESO should be careful to avoid making unnecessary changes to the Regional Planning Process before external changes are implemented. Hydro One believes that an important next step for the IESO is to evaluate on an evidentiary basis the relative impact of the identified barriers and to focus on first addressing the most material issues. This exercise should inform the prioritization and sequencing of the near-term actions identified by the IESO.

The exercise of regional planning focuses on identifying location specific demand and supply issues and assessing the solutions that resolve these issues in a cost effective manner. Regional planning Study Teams have been considering NWAs in some form since the first regional planning cycle. To date, Regional planning Study Teams have not been able to identify a NWA that can address such a need in an effective manner while still being economically viable within the current

regulatory framework. If the viability or value proposition of NWA hinges on the ability to generate additional revenue streams, then maybe this is the most critical barrier for their adoption rather than a premature change to the Regional Planning Process. Regulatory changes can impact system costs and the IESO should be careful not to pursue too many changes simultaneously. The IESO should focus on those changes that are likely to yield the greatest benefits.

Hydro One submits that the IESO is missing one barrier to the implementation of NWAs and that is the current variability in system design and technical constraints of the overall electricity system in Ontario. This concern is not reflected under the “Operations” barrier. The electricity system was not designed to support large numbers of distributed energy resources (DERs) and the available capacity for connection of DERs varies throughout the province. Where DER connection capacity is not available, the connection cost responsibility largely falls on the connecting proponent which, combined with the barrier of Technology Maturity and Cost may not yield itself to allowing NWAs to equally provide cost-effective solutions in all areas of the province.

The Straw Man identified enabling value stacking as a key objective for enabling NWAs and identified four streams of value: system, local, customer and society. Hydro One agrees that system and local values should be considered within the scope of the Regional Planning process as that process recommends rate payer funder investments that benefit a wide group of customers. Care must be taken when considering customer and societal value to avoid having rate payers subsidize an investment that will largely benefit few customers. In any event, Hydro One submits that this is a broader discussion which will be determined in other forums outside of the Regional Planning Review Process such as the OEB’s Responding to DERs consultation.

As identified by the IESO, the majority of the near-time actions to enable NWAs are not directly related to the Regional Planning Process. Of the actions that are related to the Regional Planning Process, two (Support Option Development and Formalization NWA Development/Evaluation) are dependent on decisions made in other forums. These two actions relate to tools, methods and frameworks under which Regional Planning evaluates NWAs. The consideration of the value of DERs is within the proposed scope of the OEB’s Responding to DERs consultation. It is unclear how the Regional Planning process can create tools and methodologies to develop, evaluate and compare non-wires options without the OEB’s determination in that proceeding. Similarly, if NWAs must rely on multiple value streams in order to be cost-effective, it is unclear how developing tools to compare NWAs in Regional Planning will result in any assets being placed in service before a greater number of resources are able to obtain sources of revenue in the various IESO markets. Hydro One cautions the IESO against proceeding too far with changes to Regional Planning Process before foundational decisions are made regarding the regulatory framework.

As noted above, Hydro One believes that an important next step for the IESO is to evaluate the interdependencies and appropriately sequence the identified near-term actions. It is not logical or practical to pursue all eight actions in parallel. Doing so could cause undesirable inefficiencies.

Hydro One submits that the area in which the Regional Planning process can provide the greatest value in the near-term is through action #1 (Support Need Characterization). Identifying needs and available DER hosting capacity prior to future IESO market procurements could ensure that DERs/NWAs are “right-sized” to the different distribution services areas.

Hydro One agrees with leveraging Grid Innovation Fund projects, as experience/data gained from these projects would inform feasibility assessments and how different options should be considered. There are many potential technology options available, each at different maturity levels and an absence of sufficient data to make a fully informed decision.

Conclusion

Hydro One appreciates the opportunity to provide comments to the IESO regarding the Regional Planning Review Process and looks forward to future opportunities for engagement on these issues.