

# Stakeholder Feedback and IESO Response

## Feedback on Transmission System Losses – Public Information Session #1

Email from Travis Lusney, September 2, 2020

Hi Travis,

We apologize for the delay in responding to your feedback provided following the first Transmission Losses engagement session on September 6, 2019. The reason for the delay in our response was partly due to reprioritization of engagement efforts related to COVID and finalizing materials in preparation for the continuation of this engagement. We are happy to discuss your comments and these responses further, if necessary.

Please see IESO responses below to the comments and questions you provided in your feedback submission:

### Question/Comment

Slide 17 correctly states that line loading or current impacts losses. The caveat notes that keeping line losses lower will mean more facilities in service and will add cost. The caveat is not correct in all cases. Specifically, the adoption of viable Non-Wires Alternatives (NWAs) solution can reduce line loading while addressing transmission system needs at a lower cost compared to traditional transmission asset solutions. Ontario's Integrated Regional Resource Planning (IRRP) should include analysis of transmission loss savings for NWAs solutions when assessing solutions for regional power system needs.

### IESO Response

The IESO agrees that the use of NWAs may lead to mitigating line losses in certain situations. There are many factors which would influence whether a NWA would provide the additional benefit of reduced losses (a NWA may actually increase losses on the distribution system depending on factors such as its distance from/amount of load on the feeder and the length of the feeder itself. This may off-set any loss savings on the transmission system – particularly since the distribution system is operated at a much lower voltage). Loss considerations/savings for NWA would be further influenced

by the technology (e.g. losses associated with using a storage device). The IESO is developing a formalized approach to evaluation of NWAs as part of the [Regional Planning Process Review](#) stakeholder engagement.

### Question/Comment

Slide 18 notes that the assessment of losses is therefore 'typically' done on specific transmission projects where there is a potential for significant loss reduction. Can the IESO and Hydro One please expand on what they mean by typical? Is this typical for Ontario, or typical for other jurisdictions?

### IESO Response

The IESO will provide examples of projects wherein transmission losses were considered in an upcoming meeting of this stakeholder engagement.

### Question/Comment

Slide 19 states wholesale market costs of transmission losses is based on HOEP. This is incorrect and does not include Global Adjustment (GA) which represents 80% - 90% of wholesale electricity costs in Ontario. The IESO and Hydro One should work to reflect total wholesale costs for transmission losses that includes GA.

### IESO Response

The purpose of the slide was to inform stakeholders on how transmission losses are currently reported at the IESO and to further explore stakeholder opinions on this issue. The IESO will take your comment back for consideration.

### Question/Comment

Further, it is recommended that transmission losses as part of the Single-Schedule Market (SSM) design in the Market Renewal Program (MRP) should consider how GA costs could be included in wholesale market scheduling and dispatching.

### IESO Response

We have shared your comment with the team managing the MRP Energy engagement here at the IESO to ensure it is considered during the detailed design phase of engagement.

### Question/Comment

Slide 20 states that system design includes transmission losses. Can IESO or Hydro One provide documentation where this is included in system design including how these processes are included in investment decision making for the transmission system.

## IESO Response

Further details on documentation of these processes will be discussed throughout this stakeholder engagement. As noted in the September 6 engagement session, losses are a consideration in relevant equipment standards. Detailed loss calculations are also considered where there is high potential for loss reduction. As discussed in the first engagement meeting, the transmission system is planned and designed based on criteria to enable the system to serve the forecasted peak with any one element out of service. This reliability requirement typically results in redundancy of transformers and transmission lines in the highvoltage network system. As a result, while driven by reliability needs, this also results in a significant reduction of transmission losses.

## Question/Comment

Building on the previous comment, Slide 21 discusses a lifecycle cost approach. Can the IESO and Hydro One provide documentation on the lifecycle cost approach and identify where transmission losses are included. In addition, please provide examples where transmission losses analysis has been completed (either for improvements for transmission losses or rejection due to cost/technical issues/etc.).

## IESO Response

Further details on documentation of these processes will be discussed throughout this stakeholder engagement.

Thanks again for participating. We hope this addresses your comments and questions. If you require further clarification, please feel free to contact us.

Best Regards,

Dale Fitzgerald

IESO Engagement