Q. **Reference: *Structural Capacity Assessment of the Labrador Island Transmission Link (LITL),* EFLA, April 28, 2020, pages 26-27.**

"Following assumptions/simplifications are made in the study:

- *Assumptions from the design of LITL are followed unless they conflicted with CSA Standard.*
- *Wind direction is assumed transversal, 45o, or longitudinal to spans.*
- *Ice load on tower members is assumed the same as radial ice on a conductor."*
- *Load cases contain only uniform ice formation.*
- *Load cases not relevant to reliability analysis were removed from the analysis.*
- *The unbalance ice load case was removed from the analysis as it was generally not the controlling load case.*
- *Due to the size of the LITL the designers needed to split the PLS-Cadd model into separate models, 37 models were used. The towers on the end of each model is studied in less detail than other towers in this document."*

Please explain how EFLA's assumptions of only uniform ice loads on towers are consistent with Section *6.3.6.3 - Non-uniform ice formation on phase conductors and ground wires* of the CSA Standard CAN/CSA C22.3 No. 60826-10.

A. Generally, the uniform ice load is the critical ice load for most types of towers used in overhead lines. However, some tower configurations are sensitive to unbalanced loading and therefore the CSA Standard specifies uneven ice loading.

In the study, EFLA Consulting Engineers found that the design of the Labrador-Island Link used a conservative load case for conductor break that was a much stronger requirement than

requirements on non-uniform icing. As such, inclusion of non-uniform icing in the analysis was not required. However, Newfoundland and Labrador Hydro has planned to investigate unbalanced loading due to non-uniform ice formation in more detail as part of the ongoing reliability study being completed by Haldar & Associates Inc.