

August 28, 2018

**VIA COURIER, RESS and EMAIL**

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
2300 Yonge Street, 27<sup>th</sup> Floor  
Toronto, ON  
M4P 1E4

Dear Ms. Walli:

**Re: Upper Canada Transmission, Inc. (“NextBridge”) and  
Hydro One Networks Inc. (“HONI”)  
East-West Tie Line Project and Lake Superior Link Project  
Combined Hearing  
EB-2017-0182/EB-2017-0194/EB-2017-0364  
NextBridge Interrogatories to HONI**

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In accordance with Procedural Order No. 1 dated August 13, 2018, enclosed please find interrogatories filed by NextBridge to HONI in the above noted proceeding.

Yours truly,

(Original Signed)

Krista Hughes  
Senior Legal Counsel  
Enbridge Employee Services Canada Inc.

**Upper Canada Transmission Inc. (on behalf of NextBridge Infrastructure)  
Application for leave to construct an electricity  
transmission line between Thunder Bay and Wawa, Ontario**

- and -

**Hydro One Networks Inc.  
Application to upgrade existing transmission station facilities  
in the Districts of Thunder Bay and Algoma, Ontario**

-and-

**Hydro One Networks Inc.  
Application for leave to construct an electricity transmission line  
between Thunder Bay and Wawa, Ontario**

**WRITTEN INTERROGATORIES OF UPPER CANADA TRANSMISSION, INC.  
("NEXTBRIDGE") TO HYDRO ONE NETWORKS INC. ("HONI")**

**NextBridge-1**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application.

Provide all work papers, including the electronic/active version of all spreadsheets, models, analyses, input files and documents, used, relied upon, referenced and/or created in the development of the Application and exhibits.

**NextBridge-2**

Reference: EB-2017-0364 – March 29, 2018 HONI Lake Superior Link Application Additional Evidence.

Provide all work papers, including the electronic/active version of all spreadsheets, models, analyses, input files and documents, used, relied upon, referenced and/or created in the development of the Additional Evidence and exhibits.

**NextBridge-3**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application.

- a) Provide all documents, analyses, and studies presented or provided to HONI's Board of Directors that discuss the NextBridge East West Tie Line.
- b) Provide all documents, analyses, and studies presented or provided to the HONI Board of Directors that discuss the Lake Superior Link project.

#### **NextBridge-4**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application.

- a) Explain in detail whether the recent change in HONI's executive and its Board of Directors requires any additional or new corporate approvals from new executives and/or its new Board of Directors for the Lake Superior Link project. If so, please provide all documents that address the need for additional or new corporate approval(s) for the Lake Superior Link project.
- b) If additional or new approvals are required, provide all documents related to the approval or denial of approval.
- c) If additional or new approval is required, but has not yet been granted, provide the plan and timeframe to receive the approval or be denied the approval.

#### **NextBridge-5**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application.

- a) Explain in detail why HONI decided to file its Application in February 2018 and not sooner?
- b) Explain in detail when HONI first decided to file the Application?
- c) Explain in detail when HONI first decided to attempt to route through Pukaskwa National Park.
- d) Confirm that HONI never worked towards developing a leave to construct application in order to meet a 2020 in-service date for the Lake Superior Link project. If not confirmed, explain your answer in detail.

#### **NextBridge-6**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application; HONI Response to Undertaking JT2.17.

- a) Provide all correspondence between HONI and the Ministry of Energy related to Lake Superior Link.
- b) Provide all correspondence between HONI and the Ministry of Energy related to NextBridge East West Tie Line.

- c) Please update HONI's response to Undertaking JT2.17 to provide copies of correspondence between HONI, MOECC, MNRF, IESO and other government agencies regarding the proposed LSL project since May 25, 2018.
- d) Please provide all correspondence between HONI, MOECC, MNRF, IESO and other government agencies related to NextBridge East West Tie Line.

#### **NextBridge-7**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12.

- a) Explain in detail how HONI accounted for the costs of the employees, executives, and contractors who worked on the development activities prior to the filing of the Application.
- b) Confirm that the costs were separately accounted for from HONI's general transmission cost accounts. If not confirmed, explain in detail your response.
- c) Explain in detail whether HONI intends to seek recovery of the Lake Superior Link development costs and how it will seek recovery.

#### **NextBridge-8**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12.

- a) Explain in detail how HONI accounted for any capital expenditures related to the development activities prior to the filing of the Application.
- b) Confirm that the capital expenditures were separately accounted for from HONI's general transmission capital accounts. If not confirmed, explain in detail your response.
- c) Explain in detail whether HONI intends to seek recovery of the Lake Superior Link capital expenditures and how it will seek recovery.

#### **NextBridge-9**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12.

- a) Explain in detail how HONI is accounting for the costs of the employees, executives, and contractors who worked on or are working on the Lake Superior Link project after the filing of the Application.

- b) Confirm that the costs were separately accounted for from HONI's general transmission cost accounts. If not confirmed, explain in detail your answer.
- c) Explain in detail whether HONI intends to seek recovery of its construction phase (i.e., post filing of its Leave to Construct) non-capital costs and how it will seek recovery.

### **NextBridge-10**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12.

- a) Explain in detail how HONI is accounting for the capital expenditures related to the Lake Superior Link project after the filing of the Application.
- b) Confirm that the capital expenditures were separately accounted for from HONI's general transmission capital accounts. If not confirmed, explain in detail your answer.
- c) Explain in detail whether HONI intends to seek recovery of these construction phase capital expenditures and how it will seek recovery.

### **NextBridge-11**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12; EXHIBIT B, TAB 7, SCHEDULE 1, page 3, Table 2 (Development Costs); EXHIBIT B, TAB 7, SCHEDULE 1, page 7, Table 3 (Construction Costs).

- a) Provide a breakdown of costs related to all development activities prior to the filing of the Application in the same format as provided in EB-2011-0140 to Board Interrogatory 26 with the following columns: (1) the cost estimate provided in response to the EB-2011-0140 Board Interrogatory 26; (2) the "at filing of the Lake Superior Link Leave to Construct" cost estimate; (3) the amount of costs for each cost category attributable to development activities for routing through Pukaskwa National Park; and (4) the amount of costs for each cost category attributable to development activities for routing around Pukaskwa National Park. For each cost category, provide a detailed cost breakdown including separating expenses and capital costs.
- b) Confirm that since filing of the Application HONI is not aware of any costs that should have been but were not included in the Table 2 development costs. If not confirmed, please reproduce Table 2 with the inclusion of the new costs and

provide a detailed explanation for why the cost was not included in Table 2 at the time of filing the Application.

- c) For each cost category identified in HONI's response to a) above, please provide a detailed explanation of the development activities conducted and work product produced, including the dates of the activities and the production of work product. Provide copies of all work product produced.
  - i. For each identified activity(ies) and work product, indicate whether any of the activities or work product was competitively bid. For each competitively bid activity(ies) and work product, identify the selected bidder, whether the selected bidder was the lowest cost bidder and the criteria used to select the bidder. For each activity and work product not competitively procured, explain in detail why it was not competitively bid.
  - ii. For each identified activity(ies) and work product, identify any cost management or containment measures implemented.
  - iii. For each identified activity(ies) and work product, identify whether any budgeted or estimated costs were exceeded, and, if exceeded, explain in detail why the budget or estimate was exceeded.
- d) For each cost category identified in HONI's response to a) above, please identify all executives, employees, and contractors (including the name of the contractor's employer) who supervised or conducted the development activities or work product.
  - i. For each identified executive, employee, and contractor provide the number of hours worked in relation to each cost category.
  - ii. For each identified executive, employee, and contractor provide his or her billing rate.
  - iii. For each identified executive, employee, and contractor provide their job title and scope of work.
  - iv. Identify the total costs (hours times billing rate) for executive, employee, and contractor time for each cost category.
  - v. For the balance of the costs (i.e., not attributable to executives, employee, and contractor billing of hours) identify in detail what comprises those costs.
- e) For each identified executive and employee, please identify their department or division.
- f) For each identified executive, employee, and contractor also identify if he or she has conducted any work related to the NextBridge East-West Tie Line project (e.g., interconnection into HONI facilities or crossing of HONI facilities). For any identified executive, employee, and contractor provide their job title and the scope of work associated with their work related to the NextBridge East-West Tie Line and scope of work on HONI's Lake Superior Link.
  - i. Confirm that no costs associated with these executives, employees, and contractors are included in HONI's development costs. If confirmed,

explain in detail how HONI is capturing these costs and whether HONI intends to seek recovery for these costs. If not confirmed, explain your answer in detail.

- g) For each cost category identified in HONI's response to a) above, identify each activity or work product that continued to be conducted or developed after the filing of the Application.
- i. For each identified activity and work product, identify where the costs are captured in Table 3 (construction costs) of the Application.
  - ii. For each identified activity and work product, provide the actual spend from the date of filing of the Application to present.
  - iii. For each identified activity and work product, provide the estimated spend from present to the projected in-service date of the Lake Superior Link project if the project routes through Pukaskwa National Park.
  - iv. For each identified activity and work product, provide the estimated spend from present to the projected in-service date of the Lake Superior Link project if the project routes around Pukaskwa National Park.
  - v. For each identified activity and work product, provide the estimated spend from present to a (i) December 2022 and (ii) December 2023 in-service date of the Lake Superior Link project if the project routes through Pukaskwa National Park.
  - vi. For each identified activity and work product, provide the estimated spend from present to a (i) December 2022 and (ii) December 2023 in-service date of the Lake Superior Link project if the project routes around Pukaskwa National Park.

## **NextBridge-12**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12; EXHIBIT B, TAB 7, SCHEDULE 1, page 3, note 8; Exhibit B, TAB 7, Schedule 1 at pages 6-7.

- a) Do each of the four assumptions identified in Reference 3 remain critical to the completion of the Project, both with respect to schedule and overall costs? If yes, explain how each impacts schedule and how each impacts costs. If not, please explain why not.
- b) Identify the costs that HONI estimates it would incur if it is not allowed to use any component of NextBridge's EA filings.
  - i. Identify the costs HONI would incur if it is allowed to only use the public portion of NextBridge's EA.
- c) Explain HONI's current position whether it intends to rely on all or a portion of NextBridge's EA. To date, has HONI used any portion of the NextBridge EA-

specific development work in relation to Lake Superior Link project development?  
If so, please identify the materials used.

- d) Identify the impact to the Lake Superior Link's projected in-service date if HONI is required (1) to file its own EA, without reliance on any component of NextBridge's EA or (2) to only use the public portion of NextBridge's EA. Provide a response that considers both of the following scenarios: (1) the Lake Superior Link routes through Pukaskwa National Park and (2) Lake Superior Link around Pukaskwa National Park.
- e) Identify any other (non-EA related) NextBridge activity(ies) and/or work product that HONI plans to use or leverage, so it does not need to conduct the same activity or produce the same work product.
  - ii. Identify the costs that HONI would incur if it was required to conduct the identified activity and produce the work product without any use or leveraging of NextBridge's activities and work product.
  - iii. Identify the impact to the Lake Superior Link's projected in-service date if HONI is not able to use or leverage the identified activity or work product for both of the following scenarios: (1) the Lake Superior Link routes through Pukaskwa National Park and (2) Lake Superior Link around Pukaskwa National Park.

### **NextBridge-13**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, lines 11-12.

- a) To the extent possible, breakdown the Lake Superior Link development costs and activities with the same level of detail included in NextBridge's March 14, 2018 Additional Evidence filing, Exhibit B Tab 16 Schedule 1, Attachments 1-10.
- b) Identify whether HONI conducted or continues to conduct these activities since the filing of its Application. For any identified activity, add columns that show (i) the current amount spent for each activity from the date of filing its Application to present; (ii) the projected spend to the projected in-service date; (iii) the projected spend if the in-service date is December 2022; and (iv) the projected spend if the in-service date is December 2023.
  - i. Provide the same information for a scenario in which the Lake Superior Link routes around Pukaskwa National Park.

### **NextBridge-14**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 2, line 11; HONI Letter of Intent

to file Leave to Construct Application – East West Tie Line dated September 22, 2017.

- a) Confirm that HONI is not offering a “not-to-exceed” total fixed cost for the Lake Superior Link for either (1) its preferred route through Pukaskwa National Park, and, if required, (2) to route around Pukaskwa National Park. If not confirmed, explain your answer in detail, incorporating a breakdown and detailed explanation of what costs are included in the not to exceed total fixed price and what costs are not included in the “not-to-exceed” total fixed cost, including costs due to government agency imposed conditions, force majeure, etc. for both the preferred route through Pukaskwa National Park, and, if required, (2) to route around Pukaskwa National Park.

### **NextBridge-15**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 4, lines 10-14.

- a) Provide copies of all documents and correspondence between HONI and Parks Canada related to routing the Lake Superior Link project through Pukaskwa National Park.
  - i. Identify whether any of HONI's documents or correspondence includes visual simulations of the proposed four circuit transmission towers.
- b) Provide copies of all correspondence received by HONI expressing concerns with or opposing HONI's proposed routing through Pukaskwa National Park.
- c) Provide an estimate of when Parks Canada is expected to grant or deny HONI's request for permission to route the Lake Superior Link project through Pukaskwa National Park.
- d) Provide an update on the status of negotiations of the License of Occupation between HONI and Parks Canada for the Lake Superior Link project and existing HONI transmission line.
- e) Provide copies of any documents related to an impact assessment under the *Canadian Environmental Assessment Act* to route through Pukaskwa National Park.
  - i) Explain in detail the tasks, milestones, and timing related to such an impact assessment.
  - ii) Confirm whether it is a basic or detailed environmental assessment that is being undertaken.

### **NextBridge-16**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 6, lines 15-19:

Preamble: “Hydro One is confident in its ability to deliver the Project for \$120 million less than NextBridge’s submitted price primarily due to a more efficient route which is 10% shorter, traversing through the Pukaskwa National Park parallel to existing Hydro One infrastructure as well as an optimized tower design to reduce material and construction costs.”

- a) Provide the following information for the last 10 years for all HONI capital projects at or above \$100 million dollars: (1) the name and a detailed description of project; (2) the initial cost estimate for the project (including the date of the original cost estimate and its AACE Class designation); (3) the cost estimate at the time an application was filed with a governmental agency seeking approval to construct the project (including the date of the application and its AACE Class designation); (4) the actual cost for the project (including the date on which the actual cost was determined); (5) the original estimated in-service date for the project (including the date on which the estimated in-service date was developed); and (6) the actual in-service date for the project.
- b) For each capital project where the actual cost for the project was higher than the original cost estimate or the cost estimate at that time of filing an application for authority to construct, provide a detailed explanation of why the actual costs were higher, and include the name of the company who was the Engineering, Procurement and Construction contractor.
- c) For each capital project that the actual in-service date was later in time than the originally proposed in-service date, provide a detailed explanation of why the in-service date was not accomplished consistent with the original estimate, and include the name of the company who was the Engineering, Procurement and Construction contractor.

### **NextBridge-17**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 7, lines 10-11; EXHIBIT B, TAB 7, SCHEDULE 1, page 8, Table 4 and EXHIBIT E, TAB 1, SCHEDULE 1, pages 1-9.

- a) Explain in detail the status of obtaining the land rights for the “new right-of-way (ROW)”. Has HONI initiated land acquisition for the Lake Superior Link Project? If so, please describe what land rights have been acquired to date.
- b) Identify how many parcels have been identified as needed to be expropriated?
- c) Explain in detail what is meant by the phrase “accelerated land acquisition program”.
- d) How many parcels is HONI estimating will be acquired and/or expropriated through this “accelerated land acquisition program”?

### **NextBridge-18**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, page 8, Table 4.

Please update the key risks included in the Monte Carlo simulation identified in Table 4 with the best information known to HONI at this time.

### **NextBridge-19**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1 pages 5-9, Table 4.

- a) Provide any Monte Carlo simulation conducted by or for SNC-Lavalin to determine its contingency.
- b) Identify the amount of contingency to be carried by SNC-Lavalin.
  - i. Explain whether SNC-Lavalin contingency is a contractual obligation, and, if so, provide a copy of the contract that requires SNC-Lavalin to carry contingency, and identify the provision in the contract that obligates SNC-Lavalin.
  - ii. Identify whether HONI's construction cost estimates in Table 3 of its Application capture SNC-Lavalin's contingency cost. If yes, identify where these costs are captured in Table 3. If the costs are not captured in Table 3, explain your answer in detail.
- c) Explain the purpose of HONI carrying contingency, including what the contingency covers and does not cover.
  - i. Explain what could cause HONI to exceed its contingency.
- d) Explain the purpose of SNC-Lavalin carrying contingency, including what the contingency covers and does not cover.
  - i. Explain what could cause SNC-Lavalin to exceed its contingency.
- e) Confirm that if all other things are equal, if HONI exceeds its contingency any exceedance increases HONI's construction cost estimate. If not confirmed, explain your answer in detail.

- f) Confirm that if all other things are equal, if SNC-Lavalin exceeds its contingency any exceedance increases the HONI construction cost estimate. If not confirmed, explain your answer in detail.

### **NextBridge-20**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 7, lines 12-13.

- a) Explain in detail the status of obtaining the land rights for the “57 km greenfield bypass around the communities of Loon Lake and Dorion.”
- b) Explain in detail why HONI intends to bypass Loon Lake.
- c) Explain in detail why HONI intends to bypass Dorion.
- d) Provide copies of all correspondence from a landowner, Indigenous Community, and governmental agency that have expressed a concern or opposition to HONI’s routes to bypass Loon Lake and/or Dorion.

### **NextBridge-21**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 7, lines 18-21; NextBridge July 31, 2017 EWT Line Project Leave to Construct Application, Exhibit C, Tab 2, Schedule 1, Attachment 4.

- a) Provide the estimated costs associated with Hydro One moving a 2-3 km length of Hydro One’s existing 115 kV Marathon-Terrace Bay transmission line T1M, at two locations (one located about 23 km, and the other about 38 km, west of Marathon TS) away from the existing 230 kV line, to avoid crossing the T1M line with the new 230 kV Wawa-Marathon transmission Lake Superior Lake line.
- b) Is this cost included in HONI’s construction cost estimate set forth in Table 3 in its Application; if yes, identify where it is included; if no, explain why not.
- c) HONI advised NextBridge in reference 2 that “Hydro One believes that four of the crossings, involving circuit T1M, can be avoided by relocating two short sections of circuit T1M. At these two sections (one located about 17 km and the other about 33 km west of Marathon TS) circuit T1M comes close to the existing 230 kV line, reducing the distance between their center-lines to less than 55 m, leaving insufficient room for the new EWT lines to pass between them.” Confirm if the sections of T1M line that HONI advised NextBridge must be relocated are the same sections that HONI proposes to relocate in its application. If not confirmed, explain your answer in detail.

### **NextBridge-22**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 7, lines 22-26:

Preamble: “In the future, when the need for 650 MW east-west transfer capability materializes, Hydro One will upgrade sections of the existing 115 kV Alexander-Aguasabon transmission line A5A and Marathon-Terrace Bay transmission line T1M by modifying the cross-arms and/or insulators on some of the structures of these two lines.”

- a) Explain in detail why this work is necessary and related to the new Lake Superior Link project and identify its associated costs.
- b) Confirm that the estimated cost of this work is included in HONI’s construction cost estimate set forth in Table 3 in its Application. If confirmed, identify where the cost is included in the cost estimate. If not confirmed, explain what the estimated costs are, where these costs are to be captured and whether HONI intends to seek recovery of the costs.
- c) Explain in detail when this work will be scheduled in relation to the overall Lake Superior Link project schedule.

### **NextBridge-23**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, line 2-3:

Preamble: “Hydro One will install a new 230 kV double-circuit transmission line, 133 km in total, on a new Right-Of-Way...”

- a) Provide the status of obtaining the land rights for this 133 km.

### **NextBridge-24**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, lines 11-14; EB-2017-0364 LSL Motion Additional Evidence Attachment 5; EXHIBIT C, TAB 2, SCHEDULE 1.

Preamble: “Hydro One is proposing to convert approximately 35km of the existing 230 kV double-circuit transmission line by upgrading to a four circuit transmission line (replace the existing double circuit towers with four circuit guyed towers and add conductors and insulators for the two new circuits.”

- a) Provide copies of the current tower designs for the four circuit transmission line, including all load trees, finite element models, and tower weight.
- b) Provide the all-in (design, testing, manufacturing, delivery, assembly, construction) cost estimate for the four circuit towers to be used in Pukaskwa National Park. Explain where in Table 3 of the Application these costs are captured.
  - i. Breakdown the all-in costs by design, testing, manufacturing, delivery, assembly and construction, including conductor, insulators, and retrofitting the existing foundations.
  - ii. Compare the all-in cost of the four circuit transmission towers to the all in cost estimate for double circuit transmission towers outside of Pukaskwa National Park.
  - iii. Provide copies of all workpapers associated with the all-in costs for the four circuit and double circuit transmission towers.
- c) Provide the right of way width selection criteria for HONI's four circuit transmission tower design, including conductor blowout clearance criteria to the edge of the existing East-West Tie Line right of way, and any conductor blowout weather cases.
  - i. Provide a table of the blowout clearance to the edge of the right of way in all of the swing conditions and using the OEB's 5 year gust condition for all span lengths.
- d) Identify any example in which a transmission line of 230 kV or higher has used 80- to 90 consecutive four circuit transmission towers. If any example is provided, identify the owner of the line, the geographic location of the line, whether the line has experienced a forced outage over 1 day, including the cause and duration of the outage, and whether the outage was caused by a tower collapse. If there was a tower collapse, identify whether the tower was designed to a 1 in 50 or 1 in 100 year weather event.
- e) Provide copies of all documents and correspondence with and from NPCC and NERC related to the use of the Lake Superior Link four circuit transmission towers.
- f) Provide any visual simulations of the four circuit transmission line.
- g) For the last 3 years, provide copies of all documents, analyses, and studies related to the design, testing, manufacturing, delivery, assembly, construction, maintenance, and operation of the proposed four circuit transmission line.

## **NextBridge-25**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, lines 11-14; EB-2017-0364 LSL

Motion Additional Evidence Attachment 5; EXHIBIT C, TAB 2,  
SCHEDULE 1.

Preamble: “Hydro One is proposing to convert approximately 35 km of the existing 230 kV double-circuit transmission line by upgrading to a four circuit transmission line (replace the existing double circuit towers with four circuit guyed towers and add conductors and insulators for the two new circuits)...”

- a) Provide copies of all documents and plans on how HONI will deliver, assemble and construct, operate, and maintain the four circuit transmission towers and string its conductor.
  - i. If not in these documents and plans, explain if the existing conductor will be used on the new four circuit transmission towers. If it will be used, explain how the existing conductor will be removed and protected during construction and re-connected to the new four circuit transmission towers. If it will be used, explain the age of the current conductor, and why given its age it is not in need of replacement, and how it will be protected from damage during the transition to the four circuit transmission towers. If it will not be used, identify the cost of the new conductor, and explain whether HONI’s construction cost estimate in Table 3 of its Application includes the estimate of new conductor for all four circuits. If it does include the costs, identify where in the cost estimate it is included in Table 3. If it does not include these costs, explain why HONI did not include these costs in the construction costs estimate for the Lake Superior Link.
  - ii. If not in these documents and plans, explain in detail the delivery and assembly process for the four circuit transmission towers and stringing of conductor, including what will occur on each day, the location of laydown yards, use of helicopters, clear cutting or trees to allow for use of helicopters and laydown yards.
  - iii. In reference 2 at p.10 HONI states: “It must still be verified that sufficient landing clearance is available for helicopters, so it is possible that some isolated areas would require clearing for aerial access.” Has this verification been completed? If yes, provide a copy of the verification documents, and explain if there is any cost increases to the construction cost estimate set forth in Table 3 of the Application due to the verification. If not, when is it expected this verification will be completed and explain the potential for the verification to increase the construction cost estimate set forth in Table 3.
  - iv. If not in these documents and plans, explain where the helicopter pads will be located, including whether any pads will be in the Pukaskwa National Park, but outside of the current right of way for the existing East-West Tie Line.

- v. If not included in these documents and plans, explain the safety codes and practices that must be implemented for the helicopter landings and evacuations, if needed, in the context of the use of land beyond the existing East-West Tie Line rights of way.
- vi. If not in these documents, identify the exact locations where the four circuit transmission towers will be delivered, assembled, and erected and whether the locations are all within the existing East West Tie Line right of way.
- vii. If not in these documents, explain whether temporary structures will be used during the construction of the four circuit transmission towers. If temporary structures are to be used, provide the following:
  - 1. Explain in detail what type of temporary structures, including the foundation type will be used, how many temporary structures are needed, the placement and safety criteria to be used, the impact of the structures on the Park, including the need to clear trees for their placement, and whether the structures and foundations will all be located within the existing East West Tie Line's right of way.
  - 2. For any temporary structure to be placed outside of the existing right of way, explain how HONI will obtain the land rights needed to locate the structure.
  - 3. Identify the costs of using the temporary transmission structures and what will be done with these structures once they are no longer needed in the Pukaskwa National Park. Explain whether the costs for the use of the temporary structures are included in Table 3 of the Application. If yes, identify where the costs are captured. If no, explain in detail your answer and whether HONI will seek recovery of these costs.
- viii. If not in these documents, explain if any ground based access will be required in the Park and will any roads be constructed in Pukaskwa National Park. If roads will be constructed, explain whether all roads will be within the existing East West Tie Line right of way.

## **NextBridge-26**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, lines 11-14; EB-2017-0364 LSL Motion Additional Evidence Attachment 5; EXHIBIT C, TAB 2, SCHEDULE 1.

Preamble: "Hydro One is proposing to convert approximately 35km of the existing 230 kV double-circuit transmission line by upgrading to a four circuit transmission line (replace the existing double circuit towers with four

circuit guyed towers and add conductors and insulators for the two new circuits)...”

- a) Confirm that up to 12 guy anchors will be used for some of the four circuit transmission towers. If not confirmed, explain your answer in detail.
- b) Identify the number of four circuit transmission towers that will use 12 guy anchors as well as those that will only use 10 guy anchors, 8 guy anchors, and 6 guy anchors. Explain in detail the rationale for the use of different numbers of guy anchors.
- c) Confirm that HONI will only place the guy anchors within the right of way of existing East West Tie Line for the Pukaskwa Park segment. If confirmed, explain how HONI will assure that all guyed anchors will be within the existing right of way under all terrain scenarios, including providing copies of all supporting engineering and modeling. If not confirmed, explain how far outside the existing right of way certain guy anchors will be placed and how HONI will obtain the land rights needed to locate these guy anchors.
- d) Confirm that, all other things being equal, it would be HONI’s design preference to use less than 12 or 10 guy anchors on the four circuit transmission towers by expanding the existing right of way versus using more guy anchors within the existing right of way. If not confirmed, explain your answer in detail.
- e) Confirm that, all other things being equal, it would be HONI’s design preference to use closer spans between the four circuit transmission towers than is allowed by its plans to use the existing foundations. If not confirmed, explain your answer in detail.
- f) Explain in detail HONI’s experience in designing, operating, and maintaining towers with 4 legs (moment resisting foundations) and guy wires like those proposed through the Pukaskwa National Park.
- g) Confirm that no additional tree clearing will be required for the four circuit transmission line either during construction or operation. If not confirmed, explain your answer in detail and provide the cost of the tree clearing. If not confirmed identify where these costs are captured in HONI’s construction cost estimates in Table 3 of its Application.
- h) Confirm that HONI will not need to use any land outside of the right of way for the existing East West Tie Line in Pukaskwa National Park for the placement of its four circuit transmission towers, guy anchors, conductors, construction easements, access roads, laydown yards or any for any other reason.
  - i. If not confirmed, explain your answer in detail, including the amount of land implicated, the need to use the land, the impact to the land, the plan to obtain the necessary rights to use the land, the plan to restore the land to its original condition (including the costs of the additional land rights and restoration and whether the cost was included in the construction cost estimates set forth in Table 3 of the Application). If the costs are included, identify where in Table 3 they are captured. If the

costs are not included, confirm that inclusion of these costs would increase the construction cost estimate in Table 3.

### **NextBridge-27**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, lines 11-14

Preamble: “Hydro One is proposing to convert approximately 35km of the existing 230 kV double-circuit transmission line by upgrading to a four circuit transmission line (replace the existing double circuit towers with four circuit guyed towers and add conductors and insulators for the two new circuits)...”

- a) Explain in detail the process and status of the full scale testing of the tower designs for the four circuit transmission line, including what company is completing the testing, the cost of the testing, when the testing is estimated to be completed, and whether the completion date impacts the start of construction schedule.
  - i. Provide copies of all documents that provide any test results, even if the results are preliminary in nature.
- b) Provide the same information for each of the double circuit transmission tower designs to be used in the Lake Superior Link that are also undergoing full-scale testing.
- c) Explain in detail the potential for the results of the testing to add costs to the final designs of the transmission towers to be used in the Lake Superior Link project. Confirm whether these additional costs are captured in HONI’s construction cost estimates in Table 3 of its Application. If confirmed, identify where these costs are captured in Table 3. If not confirmed, explain whether the additional costs would increase HONI’s cost estimates in Table 3.

### **NextBridge-28**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 8, lines 11-14; EB-2017-0364 LSL Motion Additional Evidence Attachment 5; EXHIBIT C, TAB 2, SCHEDULE 1.

Preamble: “Hydro One is proposing to convert approximately 35km of the existing 230 kV double-circuit transmission line by upgrading to a four circuit transmission line (replace the existing double circuit towers with four circuit guyed towers and add conductors and insulators for the two new circuits)...”

- a) Explain in detail the impact to the environmental footprint for retrofitting the existing foundations for the four circuit transmission towers.
- b) Explain the status of the inspections of the existing foundations that will be used for the four circuit transmission tower designs. If inspections have not occurred for some or all the foundations, provide an explanation of when they will occur.
- c) For any inspections that have occurred, provide the following information: do any of the foundations need to be re-built or completely replaced to support the four circuit tower designs?
  - i. If yes, explain in detail the reasons for the need and number of foundations that need to re-build or replace the four circuit tower design and whether the footprint of the foundation will be increased, and, if increased, by how much.
  - ii. If yes, please provide all the inputs and assumptions that went into preparing the cost estimate to re-build or replace the foundations for the four circuit transmission tower designs.
  - iii. If yes, provide the cost estimates for the re-build or replacements, and explain whether those cost estimates were included in Table 3 of HONI's Application. If included, identify where these costs are captured in Table 3. If not included, confirm that the inclusion of these costs would increase HONI's construction cost estimate in Table 3.
- d) Provide the following for the existing foundations:
  - i. The testing of existing foundations, characterization of subsurface conditions, foundation retrofit designs, construction equipment and materials, testing and capping for installation of tower connections;
  - ii. A scope and schedule breakdown that includes the various construction activities from testing of existing foundations through to setting of tower connections; and
  - iii. The equipment to be used to install deep big/swamp anchors.
- e) Explain in detail what was the standard design criteria used to design and construct the existing foundations.
  - i. Explain in detail what is the current design and construction standards for foundations to support four circuit transmission towers, including whether the existing rebar will be used and whether it meets the existing concrete code.
  - ii. Provide the number of foundations that have cracks that would need to be fixed to comply with current code requirements. Explain whether the cost of fixing the cracks was included in the construction cost estimate set forth in Table 3 of the Application.
  - iii. Confirm that HONI will ensure that the existing foundations meet the current design and construction standards. If confirmed, explain in detail how the foundations will meet the current design standards and the cost

- of meeting the new design standards. If not confirmed, explain in detail your answer.
- iv. Describe the expected modifications to the foundation and stub angle contemplated for the new structure types and required loading.
  - v. Explain in detail whether HONI has hired an independent third party to verify the reasonableness of use of the existing foundations for the four circuit transmission towers, including HONI's cost estimates, design and construction plans for the existing foundations. If HONI has not hired an independent third party expert, explain in detail why such an expert has not been hired. If HONI has hired an independent third party expert, provide the scope of work and all correspondence with the expert and any documents, analyses, and studies produced by the expert.
  - vi. Confirm that all costs associated with use, retrofitting, and potential replacement of the foundations are captured in the construction cost estimates in Table 3 of the Application. If confirmed, identify where they are captured in Table 3. If not included, confirm that the inclusion of these costs would increase HONI's construction cost estimate in Table 3.

### **NextBridge-29**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 9, lines 6-17.

- a) Provide the status of HONI's acquiring of land rights outside of Pukaskwa National Park to support the Lake Superior Link, including rights for construction easements, access roads, and laydown yards.
- b) Provide the status of HONI's acquiring of land rights if it must route around Pukaskwa National Park to support the Lake Superior Link, including rights for construction easements, access roads, and laydown yards.

### **NextBridge-30**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 10, lines 3-9.

Explain in detail all work that HONI has completed with respect to its Environmental Assessment ("EA"). As part of this explanation, please include:

- a) The status of the "exemption" discussed in HONI's May 7, 2018 Additional Evidence. Has HONI applied to MOECC (now MECP) for a Declaration Order?

- b) HONI's plans on how it will complete the required studies that are impacted by seasonal or other restrictions in a timely manner to obtain the environmental permits required for the Lake Superior Link project.
- c) HONI's understanding of the need for Indigenous consultation in the context of the environmental permits.
- d) A schedule showing the required steps, milestones, and timing to file the Lake Superior Link draft EA and final EA as well to receive approval from the MECP and MNRF.
  - i. Include when final MECP and MNRF approvals are estimated to occur, and the probabilities that these dates may be missed, and probability of the missing of the approval dates, and the implications of missing those approval dates on the in-service date of the Lake Superior Link project.
- e) Provide a copy of all documents in which HONI considers conditions that may be placed in the Lake Superior Link project by MECP and MNRF, including identifying the estimated costs that could be associated with these conditions.
  - ii. Identify where in its cost estimates the costs associated with implementing these conditions are included. If not included, please add the costs to the HONI's cost estimate and update the overall estimate, accordingly.

### **NextBridge-31**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT C, TAB 1, SCHEDULE 2, page 2, lines 10-13.

Preamble: For the route alternative proposed by HONI, it is assumed that an approval process can be agreed upon which will allow approximately 12 months for HONI to complete the necessary study, consultation, and reporting to meet the EA obligations and approximately six months for regulatory approval.

Has an approval process been agreed upon with MOECC (now MECP)? If so, please provide details related to the agreed-upon process and corresponding timeline.

### **NextBridge-32**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, pages 3-5.

Confirm that all costs associated with permitting and approvals routing through Pukaskwa National Park are included the Table 2 and Table 3 cost estimates. If not

confirmed, explain your answer in detail, including if inclusion of these costs would increase the total cost estimate for the Lake Superior Link Project.

### **NextBridge-33**

Reference: EB-2017-0364 - February 15, 2018 - HONI February 15, 2018 Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 11, lines 20-22;

- a) Provide copies of all correspondence and documents over the past 3 years that show “Hydro One has strong existing relationships with these Indigenous Communities... including the six directly impacted First Nation communities.”
- b) Provide copies of any correspondence and documents for the last 3 years in which any of the Indigenous Communities has expressed a concern about HONI or otherwise been critical of HONI.

### **NextBridge-34**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, pages 11-12.

- a) Identify the Indigenous Communities that HONI will or has approached to consult in relation to the Lake Superior Link project.
- b) For each identified Indigenous Community, explain in detail the current status of HONI’s consultation.
- c) Confirm that unless HONI is able to enter into consultation agreements with each of the identified Indigenous Communities, it will not proceed with the Lake Superior Link project. If not confirmed, explain your answer in detail how HONI would proceed to construction with the Lake Superior Link project without some or all consultation agreements in place.

### **NextBridge-35**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, pages 11-12.

- a) Identify the Indigenous Communities that HONI will or has approached to participate economically in the Lake Superior Link project.
- b) For each identified Indigenous Community, explain in detail the current status of reaching an agreement on participation.
- c) Provide copies of all correspondence and documents related to seeking or agreement with an Indigenous Community on participation.

- d) Confirm that unless HONI is able to enter into participation agreements with each of the identified Indigenous Communities, it will not proceed to construction with the Lake Superior Link project. If not confirmed, explain your answer in detail how HONI would proceed to construction with the Lake Superior Link project without some or all participation agreements in place.

### **NextBridge-36**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, pages 11-12.

Provide detailed milestones and timeline by which both consultant and participation agreements must be reached with Indigenous Communities in order for HONI to meet a December 2021 in-service date, as well as a December 2022 in-service date.

### **NextBridge-37**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, pages 11-12.

Provide (from start to finish) the milestones and timeline for the consultation and participation activities associated with the Bruce to Milton project.

### **NextBridge-38**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, pages 11-12; EXHIBIT H, TAB 1, SCHEDULE 1; UNDERTAKING JT 2.16.

- a) Provide the status of HONI's offer of an equity interest to Indigenous Communities, including any associated documents and correspondence.
- b) Identify the amount of costs associated with HONI's offer of an equity interest to Indigenous Communities.
- c) Confirm that these costs are included in the Lake Superior Link cost estimate of \$636 million. If confirmed, identify whether these costs are included in Table 2 and/or 3 of the Application, and if so, in what category(ies). If not included, confirm that inclusion of these costs would increase HONI's cost estimate for the project.
- d) Identify the costs associated with subcontracting opportunities with Indigenous Communities businesses. Confirm that these costs are included in the Lake Superior Link cost estimate of \$636 million. If confirmed, identify whether these costs are included in Table 2 and/or 3 of the Application, and if so, in what

category(ies). If not included, confirm that inclusion of these costs would increase HONI's cost estimate for the project.

- e) Explain in detail what type and level of participation is anticipated for these Indigenous Communities, including any scope of work for Indigenous Communities sub-contracting opportunities.

### **NextBridge-39**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 4, lines 3-8.

- a) Explain in detail the process HONI undertook to select an Engineering, Procurement and Construction(EPC) contractor, including the firms it contacted, timing of the contacts and when the final EPC contractor was selected.
- b) Confirm that a competitive bidding process was not used. If not confirmed, provide the results of the competitive bidding process, whether SNC-Lavalin was the lowest cost bidder and the selection criteria used.

### **NextBridge-40**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 4, lines 3-8.

- a) Identify all development activities and work product SNC-Lavalin worked on and produced related to the Lake Superior Link project prior to the submittal of the Application, including the timing of those activities.
- b) For each identified activity and work project, provide the associated cost, and indicate where the cost is captured in HONI's Table 2 development costs.
- c) Provide copies of all SNC-Lavalin work product developed for the Lake Superior Link project that was finalized prior to the filing of the Application.

### **NextBridge-41**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 4, lines 3-8.

- a) Identify all activities SNC-Lavalin has or will work on and work product it has or will produce related to the Lake Superior Link project after the submittal of the Application up to the completion of construction of the project.
- b) For each identified activity and work project, identify the estimated cost.
  - i. For each cost identified, indicate whether the cost is (1) fixed or (2) subject to change, even if the change is subject to certain conditions, such as force majeure.

1. Confirm that the fixed costs are included in the costs estimates in Table 3 of the Application. If included, identify where the costs are captured. If not included, confirm that inclusion of the costs would increase the construction costs set forth in Table 3.
  2. Confirm that the “subject to change” costs are included in the cost estimates in Table 3 of the Application. If included, identify where the costs are captured. If not included, confirm that inclusion of the costs would increase the construction costs set forth in Table 3.
- c) Provide copies of all work product developed by SNC-Lavalin for the Lake Superior Link project since the filing of the Application.

### **NextBridge-42**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 4, lines 3-8.

- a) Provide copies of all Canadian (1) government agency rulings or (2) court pleadings and rulings or (3) executed settlements over the last 5 years in which SNC-Lavalin’s procurement or construction practices and costs, including cost overruns, are the subject matter of the pleading, ruling or settlement, also including the identification of any fines, penalties or sanctions imposed.
- b) For the last 10 years, provide the following information for any transmission project over 50 kilometers and at least 100 kV and above worked on by SNC-Lavalin:
  - i. The estimated in-service date at the time SNC-Lavalin was contracted to work on the project and the actual in-service date.
  - ii. The estimated cost of construction at the time SNC-Lavalin was contracted to work on the project and the actual cost of construction.
  - iii. The estimated cost of any procurement of equipment or material over \$1 million to be undertaken by SNC-Lavalin at the time SNC-Lavalin was contracted to work on the project and the actual cost of the procured equipment and material.
  - iv. Identify any transmission tower(s) that collapsed during construction, including the reason for the collapse.
  - v. Identify any transmission tower(s) that collapsed during operation, the reason for the collapse and the time to restore the line into service, including the erection of a new tower.
  - vi. Identify any project owner or Indigenous Community concerns expressed or received related to safety, procurement, contracting or construction practices, including cost overruns, and provide copies of any associated documents.

- vii. Identify any disallowance of the project owner's construction or capital costs. Provide copies of any order directing the disallowance.
- c) For the last five years, provide the following information for any capital project over \$100 million dollars:
- i. The estimated in-service date at the time SNC-Lavalin was contracted to work on the project and the actual in-service date.
  - ii. The estimated cost of construction at the time SNC-Lavalin was contracted to work on the project and the actual cost of construction.
  - iii. The estimated cost of any procurement of equipment or material over \$1 million to be undertaken by SNC-Lavalin at the time SNC-Lavalin was contracted to work on the project and the actual cost the procured equipment and material.
  - iv. Any project owner Indigenous Community concerns expressed or received related to safety, procurement, contracting or construction practices, including cost overruns, and provide copies of any associated documents.

### **NextBridge-43**

Reference: EB-2017-0364 - February 15, 2018 HONI 2018 Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 4, lines 3-8.

- a) Provide a copy of the referred to fixed price contract if different from the EPC contract provided in HONI's response to JT2.22.
- b) Define in detail what is meant and is included in "the delivery price."
- c) Confirm that the Engineering, Procurement and Construction contract has not been executed. If not confirmed, provide copies of the fully executed contract. If confirmed, explain why the contract has not been executed to date and when it is expected to be executed.
  - i. Explain whether the contract is applicable to a route through Pukaskwa National Park as well as routing around the Park.
- d) Explain in detail the following with respect to the executed or the anticipated EPC contract:
  - ii. Identify the contractual provisions that include the mechanisms or methodologies to estimate scope growth or scope changes. Explain in detail what impact that the implementation of these mechanisms and methodologies could have on HONI's construction cost estimate set forth in Table 3 of its Application, including the potential for an increase in the cost;
  - iii. Identify the contractual provisions to estimate and limit escalation costs related to an in-service date that extends beyond December 2021. Explain in detail what impact the implementation of these mechanisms

could have on HONI's construction cost estimate set forth in Table 3 of its Application, including the potential for an increase in the cost.

- e) Explain in detail (with as specific a breakdown as possible) what construction and procurement costs and risks SNC-Lavalin has agreed to incur versus what costs and risks HONI has agreed to incur, and include an explanation how such a division of costs and risk impacts the construction costs estimate set forth in Table 3 of the Application.
- i. Identify any EPC contractual provisions that permit cost overruns to be passed on to customers.
  - ii. Identify each allocation of cost risk between SNC-Lavalin and HONI.
  - iii. For each risk identified, explain in detail how it potentially can impact the actual cost of the Lake Superior Link project, and the ability for those costs to increase the total project costs for either the current plan to route through Pukaskwa National Park and/or the alternative to route around the Park. For example, who bears the risk of unconcealed subsurface condition costs – HONI or SNC-Lavalin, and how is the overall construction costs impacted by that allocation of cost risk.

#### **NextBridge-44**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) Provide a detailed explanation of (1) the activities (include a detailed scope for each activity) and capital items included in each of the cost categories listed in column 1 of Table 3; (2) the reasonableness of each activity and capital item; (3) how each cost estimate in column 2 was developed, including copies of all workpapers; and (4) the potential for an increase in any of the column 2 cost estimates. Include the following in the explanation:
- i. The roles of HONI and SNC-Lavalin in the development of each cost category in column 1 and the cost figure in column 2, including what activities, the timeframe of the activities, and scope of work performed by HONI and SNC-Lavalin.
  - ii. Identify the percentage of engineering design and work that was completed to support the construction cost estimates in column 2.
    1. Explain how this percentage of engineering design and work was completed.
    2. Confirm that the percentage of engineering completed does not provide sufficient information and details to ensure no construction cost overruns. If confirmed, provide an estimated cost of the possible construction cost overruns. If confirmed, explain whether the cost overrun figure is already included in the construction cost estimates in Table 3. If included, identify

- where it is included. If not included, confirm that inclusion of this figure would increase the construction cost estimate in Table 3.
- b) Identify the materials and equipment included in the “Material” cost category, including towers, insulators, conductors, line surge arresters.
  - c) Confirm that the percentage of engineering completed to date does not provide sufficient information and details to ensure no procurement cost overruns. If confirmed, provide an estimated cost of the possible procurement cost overruns. If confirmed, explain whether the cost overrun figure is already included in the construction cost estimates in Table 3. If included, identify where it is included. If not included, confirm that inclusion of this figure would increase the construction cost estimate in Table 3.
  - d) Identify whether HONI’s construction cost estimate in Table 3 is an AACE Class 2 or AACE Class 3 estimate. Explain in detail at what bandwidth of accuracy is HONI’s estimate within the identified Class.
    - i. Explain what information or scope is lacking for HONI to provide a Class 1 estimate, and the timing of HONI being able to provide a Class 1 estimate.
    - ii. Confirm that the Table 3 cost estimate may increase until such time that HONI has a Class 1 cost estimate. If not confirmed, explain your answer in detail. If confirmed, identify the possible percentage increase in construction costs from the Table 3 estimate at the time of the submittal of the Application to the Class 1 estimate.
  - e) Provide a detailed breakdown of the costs set forth in Table 3 associated with the construction of the four circuit transmission towers in Pukaskwa National Park.
  - f) Explain in detail what consultation and participation activities and costs are included in First Nation and Métis Consultation cost category. Is it HONI’s position that there are no additional construction phase costs related to First Nation and Métis consultation and participation other than that in this cost category?
    - i. If yes, explain your answer in detail and confirm that HONI has no intention to spend any additional funds on First Nation and Métis consultation and participation than that which is represented in column 2 of this cost category. If no, identify and explain in detail the additional costs that HONI expects to expend on First Nation and Métis consultation and participation, respectively. Confirm that these additional costs are not included in HONI’s current construction cost estimate in Table 3. If confirmed identify where they are captured in the construction cost estimate. If not confirmed, explain in detail why these costs were not included, and if HONI intends to add these costs to its construction cost estimate and seek recovery of the costs.
  - g) Confirm that since the filing of the Application HONI is not aware of any costs that should have been but were not included in the Table 3 construction cost estimate, such as escalation cost for materials or new tower designs due to the need for extra-long spans. If not confirmed, please reproduce Table 3 with the

inclusion of the new cost estimate and provide a detailed explanation for why the cost was not included in Table 3 at the time of filing the Application.

- h) Confirm that the Table 3 estimate cost estimate will increase if the in-service date for the Lake Superior Link is delayed beyond December 2021. If confirmed, provide the cost estimate increase in Table 3 construction costs for a December 2022 in-service date. If not confirmed, explain your answer in detail.
- i) Confirm that the Table 3 estimate cost estimate will increase if the in-service date for the Lake Superior Link is delayed until December 2023. If confirmed, provide the cost estimate increase in Table 3 construction costs for a December 2023 in-service date. If not confirmed, explain your answer in detail.
- j) Reproduce Table 3 and each answer to all the questions set forth in this interrogatory for HONI's alternative to route around Pukaskwa National Park.

#### **NextBridge-45**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) Compare HONI's cost category First Nation and Métis Consultation to NextBridge's same category in Table 2 of the NextBridge Application at Exhibit B, Tab 9, Schedule 1, Table 2. Explain in detail why HONI believes it can proceed with the Lake Superior Link project and only incur approximately \$1.1 M for such consultations?
- b) Provide copies of any documents or workpapers supporting HONI's answer.

#### **NextBridge-46**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) For each cost category in column 1, identify any cost that has been incurred (including when it was incurred) or any contract that has been executed (including when it was executed) that supports the reasonableness of the cost estimate in column 2, or, conversely, requires an upward adjustment to the costs in column 2. If an upward adjustment is required, identify the new cost estimate. Provide copies of any supporting documentation used to develop your answer.

- b) If the answer is that there are little known costs that have been incurred and contracts executed, explain in detail when these costs will be known and contracts executed.
- c) Reproduce Table 3 and answer each of the questions set forth in this interrogatory for HONI's alternative to route around Pukaskwa National Park.

### **NextBridge-47**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) For each cost category, provide a detailed explanation of the activities conducted or to be conducted and work product produced or to be produced.
- b) For each identified activity(ies) and work product, indicate whether any of the activities or work product was competitively bid. For each competitively bid activity(ies) and work product, identify the selected bidder, whether the selected bidder was the lowest cost bidder and criteria used to select the bidder. For each activity and work product not competitively procured, explain in detail why it was not competitively bid.
- c) For each identified activity(ies) and work product, identify any cost management or containment measures implemented.
- d) For each identified activity(ies) and work product, identify whether any budgeted or estimated costs were exceeded, and, if exceeded, explain in detail why the budget or estimate was exceeded.
- e) For each identified activity and work product, provide the actual spend from the filing of the Application to present.
- f) For each identified activity and work product, provide the estimated spend from present to the projected in-service date of the Lake Superior Link project if the project routes through Pukaskwa National Park.
- g) For each identified activity and work product, provide the estimated spend from present to the projected in-service date of the Lake Superior Link project if the project routes around Pukaskwa National Park.
- h) For each identified activity and work product, provide the estimated spend from present to a (i) December 2022 and (ii) December 2023 in-service date of the Lake Superior Link project if the project routes through Pukaskwa National Park.
- i) For each identified activity and work product, provide the estimated spend from present to a (i) December 2022 and (ii) December 2023 in-service date of the Lake Superior Link project if the project routes around Pukaskwa National Park.
- j) For each identified activity and work product, identify all executives, employees, and contractors (including the name of the contractor's employer) who supervises or conducts the activity or produces the work product.
  - i. For each identified executive, employee, and contractor provide their job title and scope of work.

- ii. For each identified executive and employee identify their department or division.
- iii. For each identified executive, employee, and contractor also identify if he or she has conducted any work related to the NextBridge East-West Tie Line project (e.g., interconnection into HONI facilities or crossing of HONI facilities). For any identified executive, employee, and contractor provide their job title and the scope of work associated with their work related to the NextBridge East-West Tie Line and scope of work on HONI's Lake Superior Link.
  1. Confirm that no costs associated with the time that these executives, employees, and contractors participated in work related to the NextBridge East-West Tie Line Project are included in HONI's Lake Superior Link construction costs. If confirmed, explain in detail how HONI is capturing these costs and will they seek recovery for these costs. If not confirmed, explain your answer in detail.

#### **NextBridge-48**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs); EXHIBIT C, TAB 2, SCHEDULE 1.

- a) Provide a copy of the most up-to-date tables showing all proposed transmission structures for the Lake Superior Link project, including structure numbers, span lengths, structure types, and the associated structure drawings per structure type.
- b) Provide one table for routing through Pukaskwa National Park; and
- c) One table for routing around Pukaskwa National Park.
- d) If one or both of tables have not been developed, explain why not and when they will be developed.
- e) Explain in detail whether HONI's wind span is less than the average span.
- f) Provide the ratio of self-supporting to guy structures at the time of filing the Application and in the tables.
- g) Provide the load trees for each of the tower designs set forth in the tables.
- h) Confirm that the information provided in response to this interrogatory does not change the construction cost estimate in Table 3 of the Application. If not confirmed, please reproduce Table 3 for routing through Pukaskwa National Park and around Pukaskwa National Park with the new cost estimate. If confirmed, explain in detail why the information does not change the cost estimate.

#### **NextBridge-49**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs); EXHIBIT C, TAB 2, SCHEDULE 1.

- a) Confirm that HONI's galloping analysis considered single loop galloping, regardless of span length, with a primary axis limited to a maximum of 12m. If not confirmed, explain your answer in detail and explain its potential impact to the construction cost estimate.
- b) Explain in detail whether HONI or its contractor has performed any geotechnical work on the project, including how the conducting or lack of conducting of geotechnical impacts its construction cost estimate.
- c) Confirm that the information provided in to this interrogatory does not change the construction cost estimate in Table 3 of the Application. If not confirmed, please reproduce Table 3 for routing through Pukaskwa National Park and around Pukaskwa National Park with the new cost estimate. If confirmed, explain in detail why the information in the tables does not change the cost estimate.

#### **NextBridge-50**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) To the extent possible, provide the same information NextBridge provided in response to CCC Interrogatory #8. Specifically:
  - i. Identify the total spend to date on the Lake Superior Link project broken down by category up and until the filing of the Application, and from the filing of the Application to present.
  - ii. Breakdown the spend rate by scope of work and associated expenses and capital expenditures.
- b) Identify the portion of the construction costs related to routing through Pukaskwa National Park.
  - i. Provide a breakdown of the expenses and capital expenditures related to routing through Pukaskwa National Park by scope of work, and include identifying the expenses and capital expenditures incurred prior to the filing of the Application, and between the filing of the Application and present.
- c) Provide the projected spend rate for the Lake Superior Link project from present to in-service date, broken down by scope of work, and expenses and capital expenditures.

#### **NextBridge-51**

Reference: EB-2017-0364 - February 15, 2018 - HONI February 15, 2018 Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 5 Table 3 (Construction Costs).

- a) To the extent possible, also provide the same information NextBridge provided in response to CCC Interrogatory #8 for HONI's alternative route around Pukaskwa National Park. In doing so, also:
  - i. Identify the total spend to date on the Lake Superior Link project broken down by spend up and until the filing of the Application, and from the filing of the Application to present.
  - ii. Breakdown the spend rate by scope of work and associated expenses and capital expenditures.
  
- b) Provide the projected spend rate for the Lake Superior Link project from present to in-service date, broken down by scope of work, and expenses and capital expenditures.

### **NextBridge-52**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Pages 6-9.

Provide an update, as needed, to each identified assumption, risk and contingency, including any implications on the estimated cost of the project and the in-service date.

### **NextBridge-53**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 8.

Preamble: "Scheduled 15-days continuous double-circuit outage to replace towers in Pukaskwa National Park delayed".

- a) Provide as detailed a plan and schedule as possible for the estimated 15 day outage through the Pukaskwa National Park showing sequence and durations of the following activities: mobilization; foundation upgrades; moving or removing the existing conductor; removing the existing structures; installing the guy anchors; installing the new structures; stringing the new conductor; re-attaching or re-stringing the existing conductor; and reclamation.
  - i. If not included in the plan, explain in detail the number of days of contingencies are estimated for the outage due to delays for weather or unexpected complications. Explain whether extended delay would increase the costs of the construction in Pukaskwa National Park and by how much per day. If there is an increase in costs, identify the costs and

whether the cost is already included in the costs estimates in Table 3 of the Application. If confirmed, identify where in Table 3 these costs are included. If not included, confirm that inclusion of these costs would increase the total construction cost estimate in Table 3.

- b) Explain in detail how sky cranes will be used during the 15 day outage to construct the section through Pukaskwa National Park, including the proposed number of sky cranes?
- c) Explain in detail how helicopters, other than sky cranes, will be used to construct the section through Pukaskwa National Park during the 15 day outage?
- d) Confirm that HONI has not included any replacement costs for energy or capacity during the 15-day outage in the construction costs set forth in Table 3 of the Application. If not confirmed, identify where in Table 3 these costs are included.

#### **NextBridge-54**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 1, Page 10, lines 1-13.

Provide any update on “risk elements not included in the HONI price”, including whether the update impacts the estimated cost of the project set forth in Table 3 and/or the December 2021 in-service date.

#### **NextBridge-55**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 6, lines 15-19; EB-2017-0364 – Technical Conference – HONI responses to Undertaking JT2.19 and JT2.20.

Preamble: “Hydro One is confident in its ability to deliver the Project for \$120 million less than NextBridge’s submitted price primarily due to a more efficient route which is 10% shorter, traversing through the Pukaskwa National Park parallel to existing Hydro One infrastructure as well as an optimized tower design to reduce material and construction costs.”

Explain in detail any differences in the detailed cost estimate provided and answers provided in Exhibit JT2.19 (November 2, 2017 memo) and Exhibit JT2.20.

#### **NextBridge-56**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 4, line 11; February 15, 2018

HONI Lake Superior Link Application, EXHIBIT B, TAB 7, SCHEDULE 2  
Page 4, lines 7-9.

Preamble: “Hydro One forecasts that its capital and OM&A costs will be, respectively, \$120 million and \$3.2 million per year lower than NextBridge’s costs.”

- a) Confirm that HONI’s incremental OM&A cost estimates does not include costs related to regulatory, compliance, and administrative costs. If not confirmed, explain your answer in detail including what costs are assigned to regulatory, compliance, Indigenous land payments for Federal reserve crossings, and administrative costs.
- b) Confirm that incremental OM&A cost estimates do not include any costs associated with restoration of the Lake Superior Link transmission line. If not confirmed, explain your answer in detail.
- c) Please confirm that EWT LP’s 2013 designation application O&M costs were estimated at \$7.1M.

#### **NextBridge-57**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application EXHIBIT B, TAB 11, SCHEDULE 1, Page 1 (Project Schedule) and EB-2017-0364 – Hearing of Motion – Technical Conference HONI Undertaking response to JT2.9.

- a) Provide an up-to-date and as detailed as possible project schedule for HONI’s construction through Pukaskwa National Park, including (1) identifying all required approvals and permits, Indigenous Communities consultations and project milestones; (2) explaining in detail the status of each required approval and permit, Indigenous Communities consultations and project milestones; (3) identifying all risks (including possible delays) associated with each approval, permit, Indigenous communities consultation and milestone; (4) providing for each required approval and permit, Indigenous Communities consultations and project milestone, the impact to the in-service date if the approval, permit and/or milestone is missed by six months and one year.
- b) Please provide a map and schedule of the environment constraints and associated timing windows and a detailed project plan and schedule of how HONI will sequence construction around the constraints and timing windows.
- c) Explain in detail whether it is still HONI’s position that its “project float of approximately four months (two months of regulatory float and two calendar months of construction float)” remains valid. If not confirmed, explain in detail what is the new “project float.”
- d) Provide the same information requested in this interrogatory for HONI’s alternative to route around Pukaskwa National Park.

## **NextBridge-58**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application EXHIBIT C, TAB 2, SCHEDULE 1, Pages 1-5.

- a) Confirm that HONI is meeting the OEB's "Minimum Technical Requirements for the Reference Option of the E-W Tie Line" dated November 9, 2011. If not confirmed, explain your answer in detail.
- b) Provide a detailed plan on how HONI will meet the OEB's lightning outage requirements listed in the "Minimum Technical Requirements for the Reference Option of the E-W Tie Line" dated November 9, 2011.
- c) Confirm whether the existing HONI EWT has been de-rated for lightning storms due to difficult grounding in the Canadian Shield. If confirmed, explain your answer in detail and provide a copy of any applicable criteria.
- d) Provide HONI's lightning outage data for the existing EWT from 2012 to 2018.
- e) Explain in detail whether HONI met the OEB's minimum technical requirements for lightning outages from the years 2002 to 2011 for the existing EWT.
- f) Explain in detail how HONI plans to meet the OEB's minimum technical requirements for lightning outages on the Lake Superior Link project, including for its four circuit transmission towers. Identify the costs for compliance and whether the costs are captured in its cost estimates. If yes, identify wherein the cost estimates it is captured. If no, explain why these costs have not been included and whether HONI now plans to include them.
- g) Explain in detail how HONI will meet the OEB's galloping requirements listed in the "Minimum Technical Requirements for the Reference Option of the E-W Tie Line" dated November 9, 2011.
- h) Explain in detail whether HONI will meet the 20 ohm maximum tower ground resistance listed in the "Minimum Technical Requirements for the Reference Option of the E-W Tie Line" dated November 9, 2011. If yes, provide all grounding designs, drawings, calculations and assumptions used to meet the 20 ohm maximum tower ground resistance. If no, describe in detail how HONI is ensuring that the Lake Superior Link line is properly grounded and provide all grounding designs, drawings, calculations and assumptions used.
- i) Confirm that HONI considered a buffer around waterbodies. If confirmed, provide the buffer used and also explain what is the HONI criteria for spotting structures, including guy wires and anchors, within the waterbody buffer. If not confirmed, explain your answer in detail.
- j) Provide design criteria, load trees, and finite element models of the "optimized towers" for all the towers being proposed on the Lake Superior Link project.
- k) Will HONI use low loss fiber on the Lake Superior Link project? If yes, identify the cost and whether the cost is included in the Table 3 of the Application construction cost estimate. If no, confirm that inclusion of the cost will increase the Table 3 construction cost estimate.

### **NextBridge-59**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application EXHIBIT C, TAB 1, SCHEDULE 1, Page 7, lines 4-6 and EXHIBIT E, TAB 1, SCHEDULE 1, page 1, lines 9-12

Preamble: “The widening required for the existing Hydro One ROW to accommodate the new transmission line is at least 40% in total, narrower than that required by NextBridge, yielding a substantially smaller footprint and ultimately less maintenance.”

“The proposed Line corridor (the “Corridor”) will have a right-of-way (ROW) width of approximately 37 metres where Hydro One parallels and overlaps is existing...transmission corridors...”

- a) Please confirm that HONI intends to parallel and overlap the existing EWT line ROW for the majority of the route;
- b) Please confirm that when NextBridge raised the concept of overlapping ROW with HONI in the designation phase, HONI stated that there was no “extra” right-of-way, and that NextBridge would be required to have a full ROW width.
- c) Confirm that if NextBridge’s Leave to Construct Application is approved, HONI will provide NextBridge the ability to overlap the existing EWT Line ROW. If not confirmed, explain your answer in detail.

### **NextBridge-60**

Reference: EB-2017-0364 - February 15, 2018 HONI Lake Superior Link Application EXHIBIT E, TAB 1, SCHEDULE 1, pages 6-7 and Attachment 1:

Preamble: “Hydro One is in the process of contracting an external appraisal service provider to complete independent appraisal reports which will be completed through the spring and summer of 2018.”

- a) Will the appraisal reports and any injurious affection determinations consider the existing EWT corridor?
- b) In the absence of these reports, how has HONI accurately estimated the cost of acquiring new land rights required for the line?
- c) HONI declares that its Land Acquisition Compensation Principles will not be applied to MNRF and/or interest holders, but rather that HONI will follow MNRF’s policy and process in these matters. Please explain in more detail what this means.
- d) How has HONI considered compensation requirements for affected Crown interest holders in its estimation of real estate costs to acquire the required land rights for the line?

- e) Are benefits (for example, such as the potential for a severance) used to offset any part of the compensation payment made to property owners?
- f) In relation to property buyout, please describe
  - i. what the 15% disturbance allowance covers, and
  - ii. in assessing relocation costs, does HONI assume that the relocation of buildings will occur on the property or on another purchased property? Has HONI identified any such properties and if so, has this cost been included in Tables 2 and 3? Please indicate where and in what amounts.

#### **NextBridge-61**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking Response to JT2.3 (Environmental Assessment).

- a) Please update the individual environmental assessment schedule set forth in Undertaking JT2.3. Explain in detail whether the update impacts in any way the ability to bring the Lake Superior Link into service by December 2021.

#### **NextBridge-62**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking Response to JT2.5 (Parks Canada).

Please update the schedule set forth in Undertaking JT2.5. Explain in detail whether the update impacts in any way the ability to bring the Lake Superior Link into service by December 2021.

#### **NextBridge-63**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking Response JT2.8 (Parks Canada).

Please update the response set forth in Undertaking JT2.8.

#### **NextBridge-64**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking Response JT2.30.

Please update and resubmit the probabilistic Monte Carlo analysis used to confirm the LSL schedule for both the preferred route through Pukaskwa National Park and alternative route around Pukaskwa National Park.

### **NextBridge-65**

Reference: EB-2017-0365 - HONI Lake Superior Link Application - March 29, 2018 Additional Evidence, System Impact Assessment, Page 2; EB-2017-0364 Hearing of Motion – Technical Conference – HONI Undertaking Response to JT 2.13. Provide the required outage plan.

- a) If an outage plan has not yet been developed, provide a detailed explanation of what will be included in the outage plan, including how HONI will respond and in what time frame to a tower collapse and tower damage on the Lake Superior Link project. Include in this response:
  - i. HONI's estimated days it would take to fully restore one tower collapse in Pukaskwa National Park, including how the new tower would be transported, assembled, and erected, as well as how the collapsed tower would be removed and
  - ii. an explanation of response time in which the tower collapse is a first priority to be restored versus a lower priority to be restored due to other transmission forced outage issues.
  - iii. HONI's estimated days it would take to fully restore one tower collapse on the towers outside Pukaskwa National Park, including how the new tower would be transported, assembled, and erected, as well as how the collapsed tower would be removed;
  - iv. response time in which the tower collapse is a first priority to be restored versus a lower priority to be restored due to other transmission forced outage issues
  - v. an explanation on the number of spare transmission towers, including four circuit towers, and where they will be housed? Identify the cost of the spare transmission towers.
- b) Explain in detail HONI's prioritization methodology or process for determining whether and how it will respond to a tower collapse and tower damage on the Lake Superior Link project versus other transmission forced outage issues that occur at the same time. Reference: EB-2017-0364 – Hearing of Motion – Technical Conference – Undertaking Response of HONI, found at Exhibit JT 2.13. “. . . . associated planned and unplanned work is prioritized accordingly. Had the system conditions at the time been different, Hydro One could have responded accordingly and reduced the restoration time.”
- c) Confirm that the costs of the spare towers are included in the construction cost estimate set forth in Table 3 of the Application. If confirmed, identify where in the Table cost estimates the spare towers are included. If not confirmed, explain

whether HONI will seek recovery of these spare tower costs and how it will seek recovery of them cost.

- d) Explain in detail how the anti-cascading criteria of installing an anti-cascade tower every 10km has been considered in the restoration plans?
- e) Explain in detail whether HONI has performed a residual static load analysis or an acceptable damage limit analysis to confirm that the 10km spacing is appropriate for the Lake Superior Link. If yes, provide the analysis. If no, explain in detail how HONI will determine that in the event of a failure that 10km of line would not also collapse.
- f) Provide a map showing the placement of anti-cascading structures in as much detail as possible.

### **NextBridge-66**

Reference: EB-2017- HONI Lake Superior Link Application - March 29, 2018  
Additional Evidence, System Impact Assessment Page 2:

Preamble: “Extreme contingencies that result in the loss of the four 230 kV circuits of the East-West Tie such as failure of a quadruple circuit tower can result in separation between the Northwest transmission zone and the rest of the IESO-controlled grid. Following such events, timely system restoration is critical to avoid the risk of supply shortages to the customers in the zone”.

For each HONI transmission tower failure or collapse over the past 10 years provide the following data and information:

- a) The voltage, number of towers involved, number of circuits on the towers and location indicated by urban or rural;
- b) The days of the outage of the transmission circuit (from substation to substation);
- c) Whether there was a loss of load; if yes, the duration of the loss of load;
- d) Was a root cause analysis conducted? If no, why not. If yes, provide a copy of the root cause analysis.
- e) Were any remedial measures or procedures implemented? If not, why not. If yes, provide a copy.

### **NextBridge-67**

Reference: EB-2017-0364 – March 29, 2018 - HONI LSL Motion Additional Evidence Attachment 5, page 10 states that there will be “minimal ground breaking activities to accommodate the route.”

Provide a detailed plan on how ground breaking will be minimized, including equipment showing how the foundation upgrades and guy anchors will be installed including the mixing and delivery of concrete, rebar, and grout and how the forming will take place.

### **NextBridge-68**

Reference: EB-2017-0364 – March 29, 2018 - HONI LSL Motion Additional Evidence Attachment 5, page 5 states that “the existing towers are approaching 60 years of age and components are starting to need extensive maintenance and potential replacement.”

- a) Confirm that this statement applies to the foundations. If not confirmed, explain your answer in detail. If confirmed, explain why HONI is not proposing to replace all or some of the foundations.
- b) Explain in detail HONI's plans to conduct extensive maintenance and potential replacement on the existing East West Tie Line in and outside the Pukaskwa National Park.

### **NextBridge-69**

Reference: EB-2017-0364 - March 29, 2018 - HONI LSL Motion Additional Evidence Attachment 5, page 8.

Confirm that the sketch of the tower shows the width of the guy anchors as being 40m and the width of the right of way being 150' or ~45m. Further confirm that such widths only leave a horizontal 2.5m to fit a guy anchor in the project right of way on each side of the tower. If confirmed, explain in detail and provide any supporting documentation how the guy angles and foundation design corresponds with these width limitations. If not confirmed, explain your answer in detail.

### **NextBridge-70**

Reference: EB-2017-0364 – March 29, 2018 - HONI LSL Motion Additional Evidence Attachment 5, page 10 states “no formal impact studies have been completed for the proposed use of the existing towers within the Park.”

Have any impact studies been completed since March 2018? If yes, provide a copy. If no, when are the impact studies expected to be completed?

### **NextBridge-71**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking JT2.22.

Provide a copy of the referred to Real Estate Plan in the EPC contract. If the plan has not yet been detailed, explain why and when it will be developed.

**NextBridge-72**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking response to JT2.22.

Provide a copy of the referred to Contractor Execution Plan in the EPC contract. If the plan has not yet been detailed, explain why and when it will be developed.

**NextBridge – 73**

Reference: EB-2017-0364 – February 15, 2018 HONI Lake Superior Link Application,  
EXHIBIT B, TAB 7, SCHEDULE 1, page 8, Table 5.

Please confirm if an alternatives assessment was completed on routes and route refinements by HONI as part of the Niagara Reinforcement Project environmental assessment process.

**NextBridge-74**

Reference: EB-2017-0364 - March 29, 2018 - HONI LSL Motion Additional Evidence  
page 2.

Please confirm that HONI is not currently applying for approval to construct a route around Pukaskwa National Park.

**NextBridge-75**

Reference: EB-2017-0364 – Hearing of Motion – Technical Conference  
HONI Undertaking response to JT2.21, page 2.

Preamble: HONI explains that its budget for First Nation and Métis Consultation (FNM) is “Lower due to the substantial amount of consultation completed to date on the existing route”.

- a) Please quantify the savings that HONI is realizing by relying on NextBridge EWT Line Project FNM Consultation work in relation to LSL project FNM consultation.
- b) Please identify all other LSL Project cost categories that are lower due to HONI’s use of work completed by NextBridge in relation to the EWT Line Project, and calculate the corresponding savings in relation to each category (other consultation, environmental etc.).

- c) Please identify the impact to the Lake Superior Link's projected in-service date if HONI is not able to use or leverage the identified activity or work product.

**NextBridge-76**

Reference: EB-2017-0364 – February 15, 2018 HONI Lake Superior Link Application, EXHIBIT B, TAB 1, SCHEDULE 1, page 12, lines 5-8, EXHIBIT B, TAB 7, SCHEDULE 1, page 3-5, Tables 2 and 3 and EXHIBIT H, TAB 1, SCHEDULE 2, page 1, lines 9-12.

- a) Please summarize public consultation activity completed to date in relation to the LSL project, including a breakdown of the \$240,000 in development costs and any other "other consultation" costs incurred to date.
- b) Please describe how stakeholders were identified for consultation purposes.
- c) Please describe in detail HONI's proposed process and public consultation plans through to in-service, including the "full slate" of communication and consultation methods to be used and in relation to what project areas. As part of this description, please include specifics related to open house activity, including the number of locations, staff participants, logistics etc.
- d) Please provide a copy of HONI's detailed consultation plan.
- e) Please explain how HONI considers that the work identified can be completed within the budgeted amount of \$160,000.