PUBLIC INTEREST ADVOCACY CENTRE
LE CENTRE POUR LA DÉFENSE DE L'INTÉRÊT PUBLIC

April 15, 2024 **VIA E-MAIL**

Nancy Marconi
Registrar
Ontario Energy Board
Toronto, ON

Dear Ms. Marconi:

Re: Generic Hearing on Uniform Transmission Rates-Phase 2 (EB-2022-0325)
HONI Background Reports on Issues 4 and 5/6
VECC's Technical Conference Questions

In accordance with Procedural Order No. 1 in the above noted proceeding attached please find VECC's clarifying questions for the April 22nd Technical Conference.

Yours truly,

William Harper
Consultant for VECC/PIAC

cc. J. Lawford, PIAC

PHASE 2 OF THE GENERIC HEARING ON UTRs (EB-2022-0325)
VECC'S TECHNICAL CONFERENCE QUESTIONS RE:
HONI BACKGROUND REPORT ON ISSUES 4, 5 AND 6

ISSUE #4

VECC TCQ-1

REFERENCE: HONI Background Report, Issue 4, pages 3 and 5

PREAMBLE: The Report states (page 3):
"A double peak billing event can occur in instances where a transmission customer is supplied by more than one connection point to the transmission system, each of which is referred to as a delivery point (DP)."

The Report states (page 5):
"The transmission-connected customers most likely to experience double peak billing events are LDCs, as approximately 70% of LDCs have multiple DPs. While approximately 25% of large commercial and industrial transmission-connected customers have multiple transmission DPs, many are not located such that load could be transferred between transmission DPs so as to result in double peak billing events"
And
"Certain transmission-connected LDCs and transmission-connected Commercial and Industrial customers with only one transmission-connected DP may have another source of supply through connection to the distribution system (essentially multiple DPs)."

a) Please clarify whether the 70% (for LDCs) applies to Network Service DPs, Line Connection DPs and Transformation Connection DPs. If the percentage is different for each of the three charge types, please provide the respective percentage of LDC customers for each.

b) For each of the three services does HONI have any estimate as to the percentage of the LDC DPs where load could be transferred between DPs so as to result in a double peak billing event (per page 5)? If so, please provide.

c) Please clarify whether the 25% (for large commercial and industrial transmission connected customers, i.e. C&I customers) applies to Network Service DPs, Line Connection DPs and Transformation Connection DPs. If the percentage is different for each of the three charge types, please provide the respective percentage of C&I customers for each.

d) For each of the three services does HONI have any estimate as to the percentage of the C&I customer DPs where load could be transferred between DPs so as to result in a double peak billing event (per page 5)? If so, please provide.

e) For those transmission connected LDCs and C&I customers that only have one DP overall (i.e., including both transmission and distribution connections), can service be maintained or is it interrupted in the event of a planned or forced outage at that single DP?

f) For those transmission connected LDCs and C&I customer that have multiple DPs (including distribution connections), but load cannot be fully transferred between DPs, can service be maintained or is it interrupted in the event of a planned or forced outage at one such DP?

VECC TCQ-2

REFERENCE: HONI Background Report, Issue 4, pages 4, 10 and 12-13

PREAMBLE: The Report states (page 4):
"However, it is also worth noting that not all load transfers for transmission connected customers with multiple DPs result in double peak billing events."

The Reports states (page 10):
"There is no historical data set for transmission charge determinants excluding double peak billing events and therefore there is no historical baseline that could be used for setting future charge determinants forecasts that exclude double peak billing events. It is not clear the effort that would be required – or if it is even possible – to accurately remove the impact of double peak events from the historical charge determinant data.
Adjusting the charge determinants to remove the impact of double peak billing events would result in a reduction in the charge determinants used to calculate UTR rates, which would result in a corresponding increase in the UTR rates applicable to all transmission-connected customers."

The Report states (pages 12-13):
"The costs related to double peak billing will be small when compared to total provincial transmission revenue requirement. Therefore, in order to ensure that transmitters recover the costs associated with refunding customers experiencing double peak billing events, it will be necessary for UTRs to be rounded to 4 decimal places."

a) Can HON please provide separate annual histories (e.g., 5 years) as to the number of transmission connected LDCs and the number of transmission connected C&I customers where load transfers between DP points were required due to the planned or forced transmission outage (regardless of whether or not it resulted in a double billing event)? If applicable, please provide separate histories for Network, Line Connection and Transformation Connection Service.

b) Given the statement on page 10 that “there is no historical data set for transmission charge determinants excluding double peak billing events” what is the basis for the statement on pages12-13 that “the costs related to double peak billing will be small when compared to total provincial transmission revenue requirement.”

c) Please provide any supporting analysis HON has performed to support the statement that “in order to ensure that transmitters recover the costs associated with refunding customers experiencing double peak billing events, it will be necessary for UTRs to be rounded to 4 decimal places” .

VECC TCQ-3

REFERENCE: HONI Background Report, Issue 4, page 5

PREAMBLE: The Report states:
“A double peak billing event can occur in instances where a transmission customer is supplied by more than one connection point to the transmission system, each of which is referred to as a delivery point (DP). At a time of a planned transmission outage (for example to facilitate system maintenance or system upgrades initiated by the transmitter or the transmission-connected customer), the customer’s load may be transferred from an impacted DP to another one of the customer’s DPs in order to avoid or minimize power interruption.”

a) Please outline the circumstances/reasons that would lead to facilities being constructed such that the load can be served from either of two transmission DPs and the capacity at each DP being sized so as to be able to supply the full load being served by both DPs as opposed either i) a single transmission DP capable of carrying the full load in question or ii) two DPs each only capable of carrying the load normally served.

b) If not addressed in the response to the preceding question, please address the following issues:

   i. Is the cost to the transmitter higher or lower when the customer is served via two DPs each capable of carrying the full load normally served by both DPs as opposed to the alternatives noted? (Note: By cost, the question is referring to the costs incurred by the transmitter to construct and operate the associated facilities)

   ii. Are there reliability (or other) benefits for the transmission customer from being served via two such DPs as opposed to the other alternatives noted?

   iii. Who (transmitter or customer) determines the number and supply capability of the DPs?

   iv. Are there instances where the transmission customer has requested that HONI provide two such DPs for reliability or other reasons?

c) If the existence of two DPs being able to service the same load improves the reliability of service to the customer, is there an argument to be made that the double billing (which effectively charges the customer for the use of both DPs) can be viewed as the cost of providing the increased reliability?

   i. Furthermore, could one posit there should be a "standby" charge for those months where load transfers and double billing do not occur?

VECC TCQ-4

REFERENCE: HONI Background Report, Issue 4, page 7
HONI Background Report, Issues 5&6, page 12

PREAMBLE: The Report states (Issue 4, page 7):
"Hydro One notes that any proposed solutions to address the double peak billing issue should meet the following two objectives:
i. Avoid levying the additional transmission charges related to double peak events or ensure refunding of the additional charges incurred by the affected customers; and
ii. All transmitters should be able to fully collect their OEB-approved revenue requirement".

The Report states (Issues 5&6, page 12):
"In establishing the unit size thresholds for embedded generation and other load displacement technologies, the OEB will need to balance fairness, practicality and cost."

a) Does any proposed solution for double billing also need to consider the objectives related to fairness, practicality and cost of implementation (as HONI has suggested for unit size thresholds)? If not, why not?

VECC TCQ-5

REFERENCE: HONI Background Report, Issue 4, page 8

PREAMBLE: The Report states:
"Under this approach (Option 2), transmission charges would be calculated based on each customer's aggregated demand from all of their DPs, for a given time interval. In other words, transmission charges would be calculated at the customer level, rather than the current practice of billing at each DP."
And
"While all transmission-connected load customers pay the Network Charge, customers who own their Line and/or Transformation Connection assets do not pay these charges. Currently, there are some transmission-connected customers with multiple DPs who own Line/Transformation assets at some of their DPs. Aggregating the demand at customer level will require additional consideration to make

sure customers are not charged for the demand supplied by assets they own. While all transmission-connected load customers pay the Network Charge, customers who own their Line and/or Transformation Connection assets do not pay these charges. Currently, there are some transmission-connected customers with multiple DPs who own Line/Transformation assets at some of their DPs. Aggregating the demand at customer level will require additional consideration to make sure customers are not charged for the demand supplied by assets they own."

a) Please comment on the advantages and disadvantages of a hybrid version of Option 2 where: i) Network Service charges are based on aggregated demand while ii) Line Connection and Transformation Connection charges are (continued) to be based on a DP basis.

VECC TCQ-6

REFERENCE: HONI Background Report, Issue 4, page 8

PREAMBLE: The Reports states:
"While all transmission-connected load customers pay the Network Charge, customers who own their Line and/or Transformation Connection assets do not pay these charges. Currently, there are some transmission-connected customers with multiple DPs who own Line/Transformation assets at some of their DPs.
Aggregating the demand at customer level will require additional consideration to make sure customers are not charged for the demand supplied by assets they own." (emphasis added)

a) Does HONI have any suggestions as to how the billing for transmission service under Option 2 could be adjusted to account for the circumstances described in the referenced statements?

b) Setting aside the issue of double billing, how would Option 2 work in a situation where the transmission customer had multiple delivery points and one (or more) was connected to the transmission system and subject to the UTRs while others (one or more) were served from a "host" LDC and subject to the host's RTSRs? Would transmission charges be based on the "aggregated demand" for all the transmission-connected DPs?

VECC TCQ-7

REFERENCE: HONI Background Report, Issue 4, pages 9-13

PREAMBLE: The Report states (page 10) with respect to Option 3:
"Adjusting the charge determinants to remove the impact of double peak billing events would result in a reduction in the charge determinants used to calculate UTR rates, which

would result in a corresponding increase in the UTR rates applicable to all transmission-connected customers."

The Report states (page 11) with respect to Option 4:
"The affected transmitter will track the refunded amounts in a deferral account."

a) Would the revenue shortfall under Option 3 that results in the need to increase the UTR rates be equal to the amounts that would be recorded in the deferral account under Option 4?

   i. If not, why not?

   ii. If yes, is the main difference between Option 3 and Option 4 the fact that Option 3 requires major administrative efforts and system changes by the IEO whereas, under Option 4, it is HONI that would incur the major administrative burden and system changes?

b) How does the revenue shortfall under Options 3 or 4 compare with the revenue shortfall associated with Option 2? (Note: An order of magnitude difference as opposed to dollar estimate would be sufficient).

ISSUES #5 & #6

VECC TCQ-8

REFERENCE: HONI Background Report, Issues 5 & 6, page 2

PREAMBLE: The Report states:
"Under gross load billing, the charges for a transmission customer are calculated as they are under net load billing plus the load supplied by any embedded generation."

a) In the case of transmission connected LDCs does the gross load billing provision apply to both: i) generation embedded in the LDC's service area that delivers power directly to the LDC and ii) generation that is embedded behind the meter of a customer of the LDC?

b) What processes/procedures does the IESO and/or HONI employ to ensure that all embedded generation subject to potentially gross load billing is: i) identified and ii) metered accordingly?

VECC TCQ-9

REFERENCE: HONI Background Report, Issues 5 & 6, page 2

PREAMBLE: The Report (page 2) describes the OEB's rationale (per its Original UTR Decision) for adopting gross load billing as follows:
"Embedded generation reduces demand on the transmission system. Given that the costs of transmission infrastructure are largely fixed, there was a need for the OEB to consider whether transmission customers who reduce their load

supplied from the transmission system by installing embedded generation should continue to be charged for the sunk costs of the transmission system that was built to supply their original load (gross load billing), or they should not bear those sunk costs (net load billing)."

The Report states (page 20):
"Gross load billing should be applied practically and achieve the objectives set out in the Original UTR Decision. The OEB should consider providing certain flexibility in applying the gross load billing rules where a situation merits such treatment and, where possible and appropriate, the OEB should provide clear direction as to how these situations should be addressed."

a) In HONI's view does the cited reference from page 2 describe the objectives of gross load billing per the Original UTR Decision that it is referring to?

   i. If not, in HONI's view, what were the objectives of gross load billing that the OEB set out in the Original UTR Decision?

b) When planning either new or the need to upgrade existing Line Connection and Transformation Connection facilities due to increased load how does HONI (and/or the IESO) account for the impact of: i) existing customer embedded generation or ii) customers' plans for new embedded generation on the load that will need to be served? In responding please specifically address whether or not such plans size the associated transmission facilities under the assumption that they will/may be required to serve load that would otherwise be served by the embedded generation.

VECC TCQ-10

REFERENCE: HONI Background Report, Issues 5 & 6, pages 3, 5 and 11-12

PREAMBLE: The Report states (page 3):
"Furthermore, the OEB determined that, for reasons of administrative simplicity and cost efficiency, new embedded generation under 1 MW serving existing load should be exempt from gross load billing and billed on a net load basis. The OEB considered that gross load billing requires the installation of separate metering for the embedded generation and the incorporation of this data into the IESO's billing and settlement processes, which would create costs and complexities that would likely outweigh any benefits from billing customers with smaller embedded generators on a gross load basis. The OEB also considered that such generators would be exempt from IESO dispatch and scheduling requirements."

The Report states (page 5):
"In determining whether a transmission customer who installs embedded generation behind their meter is subject to gross load billing, the UTR Schedule states that the thresholds for renewable and non-renewable generation apply to "customer demand that is supplied by an embedded generator unit."

The Report states (page 11):
"In the Original UTR Decision, the OEB acknowledged that, in principle, all embedded generation could cause stranding of transmission system assets. However, after considering the customer cost and administrative complexity associated with implementing gross load billing, the OEB determined that new embedded generation under 1 MW should be exempt from gross load billing."

The Report states (pages 11-12):
"If the OEB intends to review whether the current gross load billing thresholds for renewable and non-renewable embedded generation remain appropriate, the OEB should consider whether its assessment of the factors noted above remains valid and if other factors should now be considered in assessing the appropriateness of the current thresholds. For example, the OEB may want to review whether the incorporation of meter data from embedded generation into the IESO settlement process is administratively complex or burdensome on the market operator and the OEB may want to examine whether the cost of installing an additional gross load billing meter would deter customers from installing embedded generation and at what point does this cost become excessive for the customer. In establishing the unit size thresholds for embedded generation and other load displacement technologies, the OEB will need to balance fairness, practicality and cost."

a) Per page 3, the 1 MW threshold appears to have been established based on considerations of administrative efficiency, cost efficiency and generation exempt from IESO dispatch and scheduling requirements. Assuming it is determined that gross load billing is appropriate (e.g., fairly recovers costs), what are HONI's views on the following:

   i. Are the "considerations" taken into account by the OEB in its original UTR decision cost still appropriate when determining the need for threshold for the application of gross load billing?

   ii. Aside from those noted on page 12, are there other "considerations" that should be taken into account at this point in time?

b) Apart from the implications as to who pays Line Connection Service and Transformation Connection Service Charges, what are the advantages and disadvantage of using individual generating unit capacity versus overall facility capacity when determining how any threshold should be applied (e.g., are administration and metering costs impacted by the number of units installed at a facility, for purposes of gross load billing are individual generating units currently required to be metered or just the overall facility and does the IESO dispatch individual generation units or just the facility overall)?

VECC TCQ-11

REFERENCE: HONI Background Report, Issues 5 & 6, page 4
OEB's Draft Benefit-Cost Analysis Framework for Addressing Electricity System Needs, December 2023 (EB-2023-0125), Section 2.1

PREAMBLE: The Report notes that in EB-2002-0120 the OEB decided to: "…increase the qualifying limit for exemption from gross billing from 1 MW per unit to 2 MW per unit for renewable generation installations. This increase reflects a societal interest in increasing the proportion of renewable generation in the overall generation mix in the province, and the technical reality that the output of some renewable source generation equipment has advanced from under 1 MW per unit to just under 2 MW per unit."

The OEB's Draft Benefit-Cost Analysis Framework states: "The intent of the BCA Framework is to encourage the development of solutions that are in the best interests of both an electricity distributor's customers and Ontario's energy customers more broadly and to help level the playing field between NWS and traditional poles-and-wires infrastructure solutions to meet an electricity system need. As stated in the FEI Report, it is not the role of the OEB to increase or accelerate NWS adoption, or to choose one technology solution over another." (emphasis added)

a) Does HONI view there to be an inconsistency between the approach adopted in EB-2022-0120 that favoured renewable generation and the approach adopted by the recent FEI Report and OEB Draft Benefit-Cost Analysis Framework that it is not the role of the OEB to favour/choose one technology solution over another? If not, why not?

VECC TCQ-12

REFERENCE: HONI Background Report, Issues 5 & 6, pages 3 and 7

PREAMBLE: The Report states (page 3):
"However, with respect to Line Connection Service and Transformation connection Service charges, the OEB determined that gross load billing shall apply, but only for load customers who connect new embedded generation."
And
"Furthermore, the OEB determined that, for reasons of administrative simplicity and cost efficiency, new embedded generation under 1 MW serving existing load should be exempt from gross load billing and billed on a net load basis."

a) For each of Line Connection Service and Transformation Connection Service, what was the annual average monthly adjustment (e.g., based on the last 3-5 years) to the billing determinants (province –wide) due to: i) the application of the 1 MW threshold for non-renewable generation and ii) the application of the 2 MW threshold for renewable generation? In each case, what does this adjustment represent as a percentage of the actual billing determinants used for each Service?

b) For each of Line Connection Service and Transformation Connection Service, what is the number of generating units (province-wide) whose capacity results in gross load billing due to: i) the application of the 1 MW threshold for non-renewable generation and ii) the application of the 2 MW threshold for renewable generation?

c) Can HONI provide an estimate of the impact (i.e., increase in billing determinants for Line Connection and Transformation Connection) if the threshold for renewable generation was reduced to 1 MW?

d) Can HONI provide an estimate as to the number of additional embedded generating units (based on HONI's current practice with respect to defining a renewable generating unit per page 7) if the threshold for renewable generation was reduced to 1 MW?

VECC TCQ-13

REFERENCE: HONI Background Report, Issues 5 & 6, pages 6, 7 and 8

PREAMBLE: The Report states (page 6):
"In view of the above, there appears to be an acceptance and understanding from a regulatory standpoint that, in the context of generation facilities, a 'unit' is a component of a generation facility and refers to each individual set of equipment or devices that is capable of functioning independently to generate electricity."

The Report states (page 7):
"In general, a solar generation facility will consist of a set of photovoltaic cell arrays that are connected through an inverter to produce electrical power. Often, a solar facility will be designed to include multiples sets of arrays, with each array having their own inverter. In such an arrangement, each array/inverter set could be viewed as independent from an operational standpoint and would represent a single generator unit. Hydro One's practice has been to use the capacity of the inverter for each array/inverter set within an embedded solar generation facility to define an individual generator unit. In its transmission revenue requirement proceeding for years 2020-2022 (EB-2019-0082), Hydro One indicated that, when providing data to the IESO for billing Line Connection and Transformation Connection Service charges, an inverter capacity greater than or equal to 1 MW was being used as a cut-off for applying gross load billing to embedded solar generation. When questioned about the application of this threshold, Hydro One responded that, in its experience, inverter capacity for solar generation is typically small (under 0.5 MW) and, as result, the threshold limit is irrelevant."

The Report states (page 8):
"The fact that embedded solar generation is currently exempt from gross load billing (based on Hydro One's practice of using the inverter capacity of each array/inverter set within an embedded solar generation facility to define an individual generator unit) highlights an important need to review the threshold applicable to solar generation and whether the approach of using the inverter size to define the size of a generator unit is appropriate and achieves the intended objectives contemplated in the Original UTR Decision and the RP-2002-0120 Decision. By applying the 2 MW threshold on a per-unit basis, Hydro One has determined that 1,268 MW of embedded solar generation is currently exempt from gross load billing charges."

a) How else could "an individual generator unit" be defined for solar generation that could be considered to be consistent with the definition of a generating unit per page 6?

   i. Would any of these definitions result in some (or all) of the currently connected solar generation being subject to gross generation using: i) a 1 MW threshold or ii) the current 2 MW threshold?

b) If the threshold was applied on a “facility basis”, how much of the 1,268 MW of embedded solar generation would be subject to gross load billing using: i) a 1 MW threshold or ii) the current 2 MW threshold?

VECC TCQ-14

REFERENCE: HONI Background Report, Issues 5 & 6, page 8

PREAMBLE: The Report states:
“In contrast, more than half of the installed embedded wind generation capacity is being billed on a gross load basis. This is due to the fact that wind generating units tend to be larger than 2 MW.”

a) Does the reference to “wind generating units” refer to each individual wind turbine? If not, how does HONI define a “wind generating unit”?

VECC TCQ-15

REFERENCE: HONI Background Report, Issues 5 & 6, pages 4 and 9

PREAMBLE: The Report states (page 4):
“For the purpose of defining renewable generation, the OEB adopted the definition of Renewable Generating Facility being used by the Ontario government at the time, which refers to a facility that generates electricity from sources such as wind, solar, Biomass, Bio-oil, Bio-gas, landfill gas, or water.”

The Report states (page 9):
“In its transmission revenue requirement proceeding for years 2020-2022 (EB-2019-0082), Hydro One described its treatment of energy storage and the applicability of the 1 MW threshold for gross load billing. Hydro One explained its approach for treating energy storage like generation and that applying this threshold is appropriate given that the energy provided by storage is not created from a renewable process.”

a) Has the Government of Ontario adopted a more recent definition of Renewable Generation than that used in EB-2002-0120?

   i. If yes, please provide the most recent definition.

VECC TCQ-16

REFERENCE: HONI Background Report, Issues 5 & 6, page 8

PREAMBLE: The Report states (page 8):
"The UTR Schedule does not clarify whether an embedded generator unit includes an embedded energy storage unit. Furthermore, the UTR Schedule does not specify whether or not, in the circumstances where an embedded energy storage unit reduces a transmission customer's non-coincident peak in the same manner that an embedded generation unit would, energy storage should be treated as generation for the purpose of assessing gross load billing eligibility."

a) Is the installation of customer storage, particularly large capacity customer storage, a recently new phenomenon?

b) When planning either new or the need to upgrade existing Line Connection and Transformation Connection facilities due to increased load does HONI (and/or the IESO) take into account the impact of: i) existing customer storage facilities or ii) customers' plans for new storage facilities on the peak load that will need to be served? In responding please specifically address whether or not such plans size the associated transmission facilities under the assumption that they will/may be required to serve peak load that could otherwise be served by the storage facilities.

VECC TCQ-17

REFERENCE: HONI Background Report, Issues 5 & 6, pages 8-9

PREAMBLE: The Report states (page 8):
"In the absence of further guidance on these aspects, Hydro One has adopted the practice of applying gross load billing to embedded energy storage because energy storage is typically deployed by customers to reduce their non-coincident peak demand. Since storage does not rely on a renewable process for injecting power, Hydro One has applied the non-renewable generation unit threshold (1 MW) for assessing gross load billing eligibility. Where appropriate, Hydro One has relied on its practice of using the inverter to delineate units within a storage facility, consistent with its approach for treating inverter based generation."

a) To-date, how much existing and planned storage capacity (i.e., MWs) has been identified as being subject to gross load billing?

b) How would the application of the 1 MW threshold on a facility basis (as opposed to on an inverter basis) impact the MWs subject to gross load billing?

c) How would the application of a 2 MW threshold (on an inverter basis) impact the MWs subject to gross load billing?

d) How would the application of a 2 MW threshold on a facility basis (as opposed to on an inverter basis) impact the MWs subject to gross load billing?

VECC TCQ-18

REFERENCE: HONI Background Report, Issues 5 & 6, pages 12-13 and Appendix A

PREAMBLE: The Report states:
"In one case, the customer of an LDC, which is connected to Hydro One's transmission system, disagreed with Hydro One's methodology for calculating the incremental capacity that should be subject to gross load billing following a refurbishment. The transmission- connected LDC and their customer argued that the incremental capacity should be calculated at the facility level and not at the unit level, which in this case would have resulted in a lower incremental capacity value." (emphasis added)

The Report states (Appendix A):
"Load Customer has an existing (pre-1998) facility consisting of four 800 kW generating units and is replacing the four units with two new 2,000 kW units."
And
"Per the current UTR tariff, GLB shall be applied to the incremental capacity associated with any unit refurbished after 1998 and the incremental capacity is 1 MW or greater for non-renewable generation Based on the current UTR, Hydro One proposes to apply GLB on a generation unit basis and not at a facility level
Since the incremental capacity of each unit is 1,200 kW, which is greater than 1 MW, GLB would apply to each of the new units.
The total incremental capacity subject to GLB would therefore be 2,400 kW."

a) Given that the load customer was replacing the existing units with units of a completely difference size why was the project considered to be a "refurbishment" which is addressed in the current UTR tariff as opposed to the "replacement" of a generator unit that was connected through an eligible Transmission Delivery Point on or prior to October 30, 1998 which is a circumstance that is not addressed in the current UTR tariff?

VECC TCQ-19

REFERENCE: HONI Background Report, Issues 5 & 6, pages 13-14

PREAMBLE: In the Report (pages 13-14) HONI cites a couple of examples of where it views it may be appropriate for the transmitter to exempt a customer from gross load billing.

The Report states (page 14):
"Another example where discretion may be warranted is when a customer installs embedded generation for the sole purpose of "peak shaving" and mitigating their Class A Global Adjustment charges under the Industrial Conservation Initiative. In this scenario, the embedded generation is run only at select times to reduce the customer's non-coincident peak demand during anticipated Ontario peak demand hours over a base period. Where embedded generation is being deployed in this manner, this results in only a marginal impact to the customer's monthly non-coincident peak demand. Therefore, in this circumstance, it may be appropriate to exempt such embedded generation from gross load billing." (emphasis added)

a) With respect to the example referenced from page 14, what is the basis for the conclusion that "where embedded generation is being deployed in this manner, this results in only a marginal impact to the customer's monthly non-coincident peak demand"? Would this apply for all customers using embedded generation for peak shaving to mitigate their Class A Global Adjustment charges?

VECC TCQ-20

REFERENCE: HONI Background Report, Issues 5 & 6, pages 6 and 15-17

PREAMBLE: The Report (pages 15-17) sets out two options for addressing the application of gross load billing to "embedded generator units".

The Report describes Option #2 as follows:
"Revise the rules in the UTR Schedule to clarify that the thresholds for gross load billing apply to the aggregate installed capacity of all embedded generator units installed by the customer at that connection point to the system."

The Report (page 6) states:
"Hydro One is aware of several instances in which a customer has installed multiple generator units and the aggregate rated capacity of these units (i.e. the installed capacity of the embedded generation facility) exceeds the applicable gross load billing threshold. However, since none

of the individual generator units exceeds the threshold on its own, the load supplied by these units has been, and continues to be, exempt from gross load billing charges."

a) With respect to Option 2, would the adoption of a facility as opposed to unit definition for determining the threshold for gross load billing require a re-consideration of the threshold limits (Issue #4)?

b) As noted on page 6, there are instances where customers have sized the generating units at their facility so as to be exempt from gross load billing. If Option 2 was adopted would there be any ability on the part of customers (particularly those with solar wind or wind generators) to re-configure what might be otherwise be viewed as one "facility" which would exceed the threshold into two (or more) "facilities", request/obtain a separate delivery point for each and thereby be exempt from gross load billing?

   i. If yes, would such an approach be easier for customers to implement with certain types of generation and, if so, which types?

VECC TCQ-21

REFERENCE: HONI Background Report, Issues 5 & 6, page 17

PREAMBLE: For Issue #2, Option 1 is "Clarify applicability of the gross load billing thresholds to embedded generation that employs inverters, such as embedded solar generation."

The Report states as one of the "pros" of such clarification: "The gross load billing rules would not enable customers who deploy inverter-based embedded generation to be exempt from gross load billing more easily than customers who deploy other types of embedded generation."

a) The Report does not indicate what the clarification would be. Please describe the nature of the clarification proposed/anticipated by HONI such that it "would not enable customers who deploy inverter-based embedded generation to be exempt from gross load billing more easily than customers who deploy other types of embedded generation".

VECC TCQ-22

REFERENCE: HONI Background Report, Issues 5 & 6, page 17

a) For Issue 2 (Application of Gross Load Billing to Embedded Solar Generation), please provide an assessment as to the pros and cons of maintaining the status quo.

VECC TCQ-23

REFERENCE: HONI Background Report, Issues 5 & 6, pages 18-19

PREAMBLE: The Report states that the pros associated with Option #1 include: i) Customers installing energy storage would not have to pay for additional metering costs to implement gross load billing and ii) Would simplify administration of IESO settlement processes.

a) Is the cost of metering to implement gross load billing higher for energy storage than other types of embedded generation and, if so, why?

b) Is it more difficult for the IESO to administer the settlement process for an energy storage facility than for other types of embedded generation (where both exceed the 1 MW threshold) and, if so, why?

VECC TCQ-24

REFERENCE: HONI Background Report, Issues 5 & 6, pages 18-20

PREAMBLE: For Issue 3, the Report cites one of the pros of Option #2 is that "Gross load billing rules would be technologically agnostic and would treat energy storage customers the same as other embedded generation."

For Issue 3, the Report also cites one of the cons of Option #2 as "Customers with energy storage would continue to be billed on a gross load basis which could discourage future deployment of energy storage by customers."

a) With respect to Issue 3, would the assessment of Option #2 necessitate a consideration of whether a 1 MW or 2 MW threshold would be appropriate for energy storage?

   i. If yes, would such a consideration involve some of what would be assessed under Option #1 for Issue 4 (i.e., consideration of whether a higher threshold is appropriate for certain technologies)?

b) In considering the specific pro and specific con cited in the Preamble for Option 2, in HONI's view, which should be given more weight and why?

VECC TCQ-25

REFERENCE: HONI Background Report, Issues 5 & 6, pages 19-20

PREAMBLE: The cons cited for Option #1 under Issue #4 include: i) "updates to transmitter billing systems may be required to reflect changes" and ii) "updates to IESO billing and settlement processes may be required to reflect changes"

a) As the IESO does the billing for Transmission Service Charges (UTRs), what "transmitter billings systems" are being referred to in the reference?

b) Is it fair to say that for all of the issues considered in the Report related to either double billing of DPs or gross load billing the options that involve a change from the status quo would necessitate updates to transmitter billing systems?

   i. If not, which non-status quo options related to double billing would not require changes to transmitter billings systems?

   ii. If not, which non-status quo options related to gross load billing would not require changes to transmitter billings systems?

c) Is it fair to say that for all of the issues considered in in the Report related to either double billing of DPs or gross load billing that the options that involve a change from the status quo would necessitate updates to IESO billing and settlement processes with the possible exception of Option 4 related to double billing of DPs? If not, why not?

VECC TCQ-26

REFERENCE: HONI Background Report, Issues 5 & 6, pages 19-20

a) With respect to Issue 4 (Threshold Limits for Gross Load Billing), please provide assessment as to the pros and cons of maintaining the status quo.

VECC TCQ-27

REFERENCE: HONI Background Report, Issues 5 & 6, page 20

a) With respect to Section 1.5.1 (Calculating Incremental Capacity for Gross Load Billing Eligibility), is the resolution of this issue linked to the outcome of Issue 1?
   i. If not, why not?
   ii. If yes, wouldn't it be reasonable to consider the issue raised in Section 1.5.1 as part of Issue 1 (Section 1.4.1)?

VECC TCQ-28

REFERENCE: HONI Background Report, Issues 5 & 6, pages 2 and 20

PREAMBLE: The Report states (page 2):
"Under gross load billing, the charges for a transmission customer are calculated as they are under net load billing plus the load supplied by any embedded generation."

The Report states (page 20):
"There may be instances where a customer reduces their demand by installing embedded generation but the monthly transmission charges paid by the customer to the transmitter for the cost of supplying them is not affected."

The Report states (page 20):
"Gross load billing should be applied practically and achieve the objectives set out in the Original UTR Decision. The OEB

should consider providing certain flexibility in applying the gross load billing rules where a situation merits such treatment and, where possible and appropriate, the OEB should provide clear direction as to how these situations should be addressed."

a) Please explain the relevance of the first cited reference from page 20 as to whether or not a customer should be "exempt" from gross load billing.

b) In HONI's view how could/should the OEB provide the suggested flexibility (i.e., what options should the OEB consider)?