# B3 - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 001

**Reference:**

Exhibit B-3-1, DSP Section 3.0

**Preamble:**

The IESO's 2021-2024 CDM Plan includes spending for the Local Initiatives Program (LIP) for CDM savings in targeted areas of the province.

**Interrogatory:**

a) Please confirm if any of Hydro One's service territory is located within an LIP? If so, please provide a summary of the service territory areas located in an LIP, and describe how Hydro One has coordinated planning for CDM activities with the IESO in each service territory area.

**Response:**

a) Yes, Hydro One's service territory is located within a LIP. Hydro One is in early stage discussions with the IESO on our participation in the Belle River LIP.

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# B1 - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 002

**Reference:**

Exhibit B-1-1, SPF Section 1.2

**Preamble:**

Hydro One has provided a summary of transmission needs and associated investments. OSEA is interested in understanding more about the investments in CDM in each planning region.

**Interrogatory:**

a) Please provide a summary of CDM activities (i.e., GWh/year and MW peak demand) undertaken in each planning region discussed in Section 1.2.2.2 of Exhibit B-1-1.

**Response:**

a) Hydro One Transmission does not undertake CDM investments and as such does not have this information available. All CDM programs are to be administered by the IESO as per the Province of Ontario 2021-2024 Conservation and Demand Management Framework[1].

A Conservation Status Update provided by the IESO is included in Hydro One's 2021 Regional Planning Process Annual Status Report[2] in Appendix A, Table 3. This IESO update shows IESO's estimated peak demand offsets resulting from energy efficiency projects reported to occur within the respective regions.

[1] Province of Ontario 2021-2024 Conservation and Demand Management Framework - https://ero.ontario.ca/notice/019-2132

[2] 2021 Regional Planning Process Annual Status Report - https://www.hydroone.com/abouthydroone/CorporateInformation/regionalplans/Documents/HONI_RegionalPlanningStatusReport_20211101.pdf

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# D - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 003

**Reference:**

Exhibit D-4-1

**Preamble:**

Hydro One's transmission and distribution load forecasts include the impact of CDM activities. OSEA is interested in understanding Hydro One's assumptions about CDM.

**Interrogatory:**

a) For Table 2 (Exhibit D-4-1, pg. 5), Load Impact of CDM on Ontario Demand (MW), please provide the CDM impact on peak demand for winter peaks.

**Response:**

a) The requested information is provided below:

| | Cumultive CDM impact on Winter Peak Demand (MW) |
|---|---|
| 2006 | 184 |
| 2007 | 494 |
| 2008 | 567 |
| 2009 | 633 |
| 2010 | 740 |
| 2011 | 860 |
| 2012 | 974 |
| 2013 | 1,099 |
| 2014 | 1,216 |
| 2015 | 1,276 |
| 2016 | 1,492 |
| 2017 | 1,438 |
| 2018 | 1,705 |
| 2019 | 1,808 |
| 2020 | 1,811 |
| 2021 | 1,934 |
| 2022 | 2,065 |
| 2023 | 2,163 |
| 2024 | 2,153 |
| 2025 | 2,212 |
| 2026 | 2,269 |
| 2027 | 2,381 |

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# D - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 004

**Reference:**

Exhibit D-5-1

**Preamble:**

Sub-Transmission customers (i.e., large commercial and industrial customers) have increased their investment in behind-the-meter resources to reduce Global Adjustment charges. OSEA is interested in understanding Hydro One's estimate of the impact of behind-the-meter resource CDM activities on peak demand of large customers.

**Interrogatory:**

a) Does embedded generation include all behind-the-meter resources at customer sites?

b) Please provide Hydro One's estimate of behind-the-meter resource installed capacity broken into the following categories

   i. by Technology (e.g.. Cogeneration / Energy Storage / Gas-Fired Generation)

   ii. by Geographic location, i.e., by the 21 planning regions (see list in Exhibit B-3-1, Section 3.4, Appendix B), and

   iii. by Year from 2020 to 2027.

c) Please provide the estimated total impact of CDM activities from behind-the-meter resources on Hydro One's summer and winter peak demand for Hydro One's distribution system.

d) Does Hydro One have any reliability contracts to use customer behind-the-meter resources to meet distribution system needs? If so, please provide a summary of how Hydro One uses behind-the-meter resources to reduce distribution system constraints.

**Response:**

a) Embedded generation does not include all behind-the-meter resources at customer sites.

b)

i. Please see response to OSEA-005.

ii. The requested information is not available.

iii. The behind-the-meter installed capacity for 2020 is provided in the response to OSEA-005, however Hydro One does not have 2021-2027 information.

c) The requested information is not available.

d) No.

# B3 - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 005

**Reference:**

Exhibit B-3-1, DSP Section 3.4

**Preamble:**

Hydro One has a significant amount of connected Distributed Energy Resource (DER) capacity within its service territory. OSEA is interested in understanding the difference between directly connected DERs and behind-the-meter resources that can pursue CDM activities.

**Interrogatory:**

a) Figure 1 (Section 3.4.1) of Exhibit B-3-1, shows total connected capacity of DER by type. Are all of the DERs shown in this Figure directly connected DERs (i.e., Front-of-the-Meter)? If not, please provide an estimate of behind-the-meter resources by the same technology breakdown).

**Response:**

a) No. Please find below a table showing the behind-the-meter resources connected to Hydro One feeders.

| Fuel Type | Behind the Meter | |
|---|---|---|
| | Count | MW |
| Biomass | 8 | 10 |
| Wind | 27 | 0* |
| Hydro | 3 | 6 |
| Solar | 1275 | 21 |
| Other | 75 | 202 |

**The wind projects are all residential scale totaling approximately 0.03 MW, which rounds to zero.*

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# B3 - ONTARIO SUSTAINABLE ENERGY ASSOCIATION INTERROGATORY - 006

**Reference:**

Exhibit B-3-1, DSP Section 2.0 and Section 3.0

**Preamble:**

Hydro One distribution system planning and transmission system planning can consider non-wires solutions, including CDM activities, to meet power system needs. OSEA is interested in areas and examples where Hydro One deployed non-wires solutions.

**Interrogatory:**

a) Within Hydro One's Distribution System Plans, how much targeted CDM activities is Hydro One planning? Please explain in detail examples where targeted CDM activities were a cost-effective and viable solution to distribution system needs. For example, please comment on the amount of CDM activities that are included in D-SS-01 (System Upgrades Driven by Load Growth).

b) Please provide a summary of assumptions for non-wires solutions (e.g., energy storage, energy efficiency, demand response) considered by Hydro One in its distribution system plans and transmission system plans. In the summary, please provide estimated installed costs, and O&M used in the analysis for non-wires solutions compared to traditional wires investments.

c) Please provide a list and description of all non-wires solutions and/or CDM activities within Hydro One's distribution system plans.

**Response:**

a) See interrogatory response B3-Staff-148 part a) for an explanation of CDM as it relates to D-SS-01 investments. There is no targeted CDM activity within Hydro One's Distribution System Plan.

b) See interrogatory response B1-PP-003 for how non-wires alternatives are considered in the Distribution and Transmission System Plans to address load growth through the development of Integrated Regional Resource Plans. All Integrated Regional Resource Plans are posted on the IESO's website laying out the analysis and consideration of non-wires alternatives considered to address electrical needs for the province's 21 electricity planning regions.

Battery energy storage systems are a form of DER that can be used to provide reliability improvement to Hydro One's customers at a local level who are experiencing long interruption durations. Within the 2023-2027 Distribution System Plan, Hydro One is targeting installations of centralized grid-scale storage systems, as well as residential storage systems. The estimated cost to deploy this solution for about 4100 customers is detailed in ISD D-SS-04 Table 2-Total Investment Cost on page 8.

c) Hydro One aims to improve reliability for customers experiencing significant outages through energy storage solutions within the 2023-2027 Distribution System Plan. The details of the investment can be found in ISD D-SS-04.