Ontario Energy Board | Commission de l'énergie de l'Ontario

BY EMAIL AND WEB POSTING

June 26, 2025

To: All Licensed Electricity Distributors
All Participants in Consultation Process EB-2019-0207
All Other Interested Parties

Re: Distribution System Capacity Information Map – Phase 2 Implementation (EB-2019-0207)

This letter sets out the Ontario Energy Board's (OEB) requirements for electricity distributors to submit standardized data on system capacity to connect new loads. The provision of this information supports the development of a centralized, distribution-level Geographic Information System (GIS)-based Centralized Capacity Information Map (CCIM). This map responds to customers' interest in a province-wide tool that will make it easier for users and investors to identify where new facilities can connect and support more informed discussions with distributors about connection feasibility.

The CCIM will be launched in December 2025. To support timely implementation and integration:

- Distributors that utilized GIS or equivalent tools for Phase 1 are expected to submit data required for this phase, which focuses on capacity to connect new load, **by July 31, 2025**.
- Distributors that did not provide their Phase 1 map in GIS format are expected to submit the required data **by August 31, 2025**.

Distributors are required to provide the information set out in this letter and its appendix further to the licence condition that speaks to the provision of information in the form and manner required by the OEB. The required information is to be provided to Planview Utilities Services Limited (Planview), the OEB's selected vendor for the purpose of implementing the CCIM.

Background and Context

In October 2024, the OEB formalized its intent to divide the capacity information map project into two stages. Phase 1 called upon distributors to publish feeder-level and station-level capacity maps using their existing systems such as GIS platforms or manual mapping tools by March 3, 2025. Phase 2 calls for implementation of a provincial CCIM, providing customers across Ontario with easy access to more consistent and detailed system capacity information across all distributors' service areas.

This work aligns with the Minister of Energy and Mines' June, 11, 2025, Integrated Energy Plan (IEP) Directive which, among other things, directs the OEB to "enhance data sharing practices between the Independent Electricity System Operator (IESO), electricity distributors, and distributed energy resource (DER) providers in a phased approach," including through continuing to:

"...advance the OEB's ongoing work on distribution system capacity mapping to include the development of a consolidated provincial mapping platform across electricity distributors that, by December 31, 2025, describes both available capacity to accommodate new customer loads as well as hosting capacity to integrate new generating facilities."

As the directive indicates, the OEB's current work on the CCIM is a continuation of a project initiated through earlier letters of direction to the OEB from the Minister, which requires that the OEB publish and maintain a distribution sector capacity map so that those seeking to connect to the electrical grid have information about where the closest points of connection may be located.

Given development timelines and the sequencing of direction from the Minister of Energy and Mines, the OEB has focused its Phase 2 work to date on capacity information relevant to the connection of new loads. The OEB will promptly turn to requirements regarding hosting capacity to integrate new generation facilities, with the goal of having information on both aspects available by December 31, 2025.

Development of the Centralized Capacity Information Map

Phase 2 represents an opportunity to learn from and build upon the experiences of Phase 1.

Distributors' maps developed in Phase 1 varied significantly in format. Some distributors presented capacity information using geographic polygons, while others provided more granular details. Some maps provided details on distribution capacity at 8 kilovolts (kV)

and above, while others reported capacity at voltages below this level. Maps often used a variety of different metrics, units, and legends. While many distributors developed dynamic maps, several opted to provide static maps.

Phase 2 intends to address these challenges by leveraging a centralized solution that delivers a consistent and scalable province-wide map. At the same time, the OEB recognizes that the use of a centralized system requires consideration and, where warranted, accommodation of different distributor approaches, skills, resources, experience, priorities and workflows.

Principles and Objectives

To guide its work on capacity mapping via a centralized tool, the OEB developed a set of principles and objectives for Phase 2. They include:

- **Consistency:** Deliver a consistent look, feel and user experience across service areas, especially for those working with multiple distributors across the province.
- **Specificity vs. Effort:** Provide greater specificity in capacity information relative to Phase 1, being mindful of value delivered relative to level of effort required.
- **Balancing System Diversity:** Reduce risks of inconsistency across service areas, while accepting that it is not possible to eliminate the planning differences across systems and distributors.
- **Update Frequency:** Set an update frequency that balances distributor effort with providing actionable information to users.
- **Aiding Connection Process:** Approach and make design choices which consider that capacity mapping is not a substitute for the connection assessment process.

Methodology

In developing Phase 2 of the CCIM, OEB Staff engaged its Capacity Information Map Subgroup, composed of representatives from distributors, developers, consumer advocates, intervenors, energy sector associations, and other interested parties.

Through a combination of six meetings held between April and June 2025, a supplementary survey to members, and an early conceptual demo of the CCIM platform by Planview, the OEB received feedback to help define the data requirements, visualization standards, and other features of a centralized distribution-level province-wide capacity map.

What we heard

The OEB's engagement with stakeholder groups was guided by a want to identify a practical and effective design for a publicly accessible map. The map needed to balance usability for stakeholders with data integrity, security, and operational feasibility for distributors.

Stakeholders broadly agreed that standardized capacity definitions, consistent colour legends, and uniform terminology would enhance user trust and improve the utility of the map across all distributor service areas.

User groups noted that inconsistent units and thresholds in Phase 1 maps created confusion and limited their effectiveness for province-wide project planning. Many users requested greater system visibility, below 8kV. Some users also suggested that maps provide more detail about capacity available in ranges greater than 2 MVA to enable more effective screening for capacity for larger projects. Most user groups also indicated that station-specific capacity was not required to screen for available capacity for their load projects.

Some user groups expressed a preference for the display of feeder-level attributes such as feeder names and station identifiers. Distributors emphasized the need to limit the amount of operational details disclosed given security or operational risks. For example, one distributor disclosed that it selected its approach to mapping for Phase 1, in part, out of its intent to minimize the risk of equipment theft.

Distributors and distributor organizations also raised concerns pertaining to the publication of sensitive data particularly in rural or low-density areas where granular capacity values might inadvertently reveal infrastructure details unnecessarily or disclose customer-specific usage. Regarding the inclusion of feeder and station names, there was a consensus that such information was not required to support screening for capacity to connect new loads. Distributors also commented that the provision of feeder names can sometimes complicate discussions with load customers since it can cause undue focus on connecting to a specific system element.

Most stakeholders supported the idea that the map should focus on providing users necessary information on ranges of capacity available in different places across the province, while at the same time recognizing that sensitive areas, infrastructure or privacy concerns may sometimes require information to be omitted, obscured, or generalized in order to protect privacy and physical security.

When faced with the choice between showing system capacity by area or by system element, users and distributors alike generally indicated that an area-based approach

would be somewhat more effective than a feeder-specific layout in displaying needed information, while also enabling irrelevant but potentially sensitive system information to be withheld.

The need for a standardized definition of “available capacity” was widely supported. Members agreed that inconsistencies in calculation methods across distributors could reduce users’ confidence in CCIM and potentially be misleading. Many stakeholders suggested that the OEB provide guidance on the definition of “available capacity,” while others were of the view that a strict definition would be difficult to define considering the uniqueness of each distribution system and its constraints.

The opportunity to use clear, accessible disclaimers was identified to aid in setting expectations for users and mitigating risk for distributors. While some stakeholders explored the idea of login-based access or usage tracking, others noted that this feature would be costly and limit accessibility.

User groups expressed interest in a clearly defined update frequency, and that the update be visibly time-stamped. While many user groups advocated for quarterly or more frequent data updates to further increase the transparency of the distribution system, distributors raised operational concerns. Many supported a scheduled update frequency with flexibility to perform updates following material system changes, independent of the quarterly cycle.

Distributor’s Own Maps

Another theme of discussion touched upon the need for and benefit of distributor-maintained maps, either in place of or as supplements to the centralized maps. Distributor stakeholders advocated for their ability to be able to maintain their own maps given the potential for future enhancements and greater linkages with connection assessment workflows. Advocates for distributor-maintained maps nevertheless recognized the importance of minimizing the risk of customer confusion and acknowledged that a common look and feel for CCIM and distributor-maintained maps would help to avoid downsides of multiple map sources being available.

The OEB has also considered the value of distributor-maintained maps in the context of the CCIM as a central source of available capacity information. The OEB recognizes that innovation in the integration of capacity information maps with other customer-facing distributor systems can yield efficiencies and deliver better services for customers. By streamlining capacity screening information, distributors can better support customers in timely investment decisions.

Nevertheless, the OEB notes that the potential benefits of distributor's own mapping activities need to be carefully weighed against the risk of customer confusion, perceived duplications and erosion of the value of the CCIM map. Without proper coordination, a fragmented approach may reduce the effectiveness of both tools.

To safeguard the value of the CCIM as a provincially seamless, centralized tool, the OEB has defined a clear vision for the CCIM, as well as for how distributor developed tools should align:

- The CCIM is the definitive, province-wide source for capacity inquiry, the primary and most visible access point when users are screening for available capacity.
- Supplemental distributor mapping functions should ideally focus on capacity review and feasibility assessments, enabling availability screening to remain the core function of the CCIM.
- Distributor mapping tools may contain supplemental connection or system information but must maintain the overall look and feel of the CCIM, including consistent visual standards and terminology.
- Distributors should integrate with the CCIM as much as feasible.

By adhering to this approach, the CCIM will provide a trusted, unified, and efficient source of capacity information across Ontario. Maintaining this consistency is essential to meeting the needs of customers, supporting investment through the provision of business intelligence, and helping to drive toward provincial electrification and energy transition objectives.

Phase 2: Design and Implementation

After considering the range of comments, the OEB has determined the following approach for Phase 2 mapping of available capacity for new load connections. These design choices reflect the input heard from stakeholders and centralized map's intended purpose, which is to provide screening-level information and support further engagement and discussion with distributors regarding the feasibility of connection. The details of the design are set out in the *Appendix A: Data Submission Requirements For Distributors (Appendix A),* which distributors must refer to in preparing their data for sharing.

A. Design

The CCIM will adopt an area-based design, featuring geographic polygons shaded to show standardized capacity ranges. This method, which was broadly supported by stakeholders, enables the disclosure of meaningful capacity information while

maintaining a high-level geographic display that does not require disclosure of infrastructure location details that may raise security concerns.

Phase 2 will standardize information reporting to include feeders operating at 4 kV and above, better reflecting the infrastructure relevant to modern grid connections such as EV charging and DER. This represents an expansion from disclosure at the 8kV layer expected for Phase 1.

Capacity information will be described over a greater range. Phase 2 maps will provide detailed ranges of capacity to 10 MVA and above, exceeding the 2MVA and above range called for in Phase 1. Additional filtering features will allow users to search by feeder voltage and available capacity ranges.

The CCIM will also incorporate consistent terminology, standardized visualizations, intuitive user functions, embedded disclaimers, and user guidance documentation. It will also ensure AODA-compliance with colour schematic and interactive geographic area polygons.

In response to concerns expressed by stakeholders, the map's user interface will be designed to avoid identifying specific locations of distribution system infrastructure. Distributors are not to provide personal information, as that term is described in the *Freedom of Information and Protection of Privacy Act* (FIPPA), nor are they to provide information that would allow a user of the CCIM to identify any individual customers. It is the distributor's responsibility to ensure that it is not providing information of this kind. The Phase 2 map will also enable distributors to withhold or otherwise not report capacity information where a disclosure could compromise physical security of a sensitive location or load, or where a customer's privacy could be impacted. The OEB expects a distributor to provide, upon request of the OEB, a rationale for any mapping redaction; the distributor's explanation should demonstrate clearly the security or privacy concern that provides grounds for the omission.

Comprehensive data requirements and technical specifications required of distributors, including required data elements, capacity calculation guidance and submission formats are outlined in *Appendix A.* Distributors will be required to provide each reported feeder's unique identifier to support the creation of the area maps. A feeder's identifier will not be published on the map given that it is not required to support load connection inquiries. Station names are not required to be provided nor shown on the load capacity map.

The OEB notes that the value of providing details of system elements is different in the context of generation hosting capacity discussions than it is in the context of load connections. A different approach regarding the provision of station details and feeder

names for the purposes of hosting capacity may be warranted. Accordingly, the OEB expects the working group to continue its discussions on requirements and expectations regarding hosting capacity for new generation facilities.

B. Implementation

The CCIM will be hosted on the OEB's website and will serve as the centralized platform for initial capacity screening. Many stakeholders supported this centralized approach, emphasizing the importance of a single, authoritative source of information. To maximize visibility and usability of the CCIM, a distributor must prominently display or link to the CCIM within its own website, ideally embedded within a page for seamless functionality.

While many users expressed a preference for more frequent data updates, distributors raised operational and resourcing concerns. As a result, the OEB has determined to maintain the expectation for quarterly updates, with flexibility for distributors to submit interim updates in the event of material changes to their system.

The OEB also acknowledges the value in integrating capacity maps into distributor connection application workflows. In support of this, the CCIM will include direct links to each distributor's connection application portal, based on the user's selected location. This will ensure a more seamless user experience from initial capacity screening through to formal connection requests. In accordance with expectations described further in the preceding section regarding distributors' own maps, the OEB also encourages distributors to design any web-based connection workflows in ways that integrate with and transition effectively from the CCIM to enhance the customer experience.

Next Steps and Support

OEB Staff and Planview will continue to engage user groups and distributors through working groups and other meetings.

While work proceeds to implement available capacity for new loads, the OEB will now work with stakeholders to define minimum data reporting requirements for DER hosting capacity, likely to be implemented as a separate mapping layer within the CCIM. This additional component of the CCIM will provide valuable insights into the system's ability to support early screening of available capacity for generation connections and is expected to be particularly relevant to DER developers, planners, and other grid participants. The OEB will convene working group meetings to articulate and evaluate requirements for implementing the functionality regarding hosting capacity alongside

available load capability by December 2025, consistent with the Minister of Energy and Mines' IEP directive. The working group's next meeting is scheduled **for July 10, 2025**.

Additional technical guidance, including submission templates and instructions are available on Planview's data submission portal. For troubleshooting and other support, distributors may contact Mel Buske, Program Manager at melissa.buske@planview.ca.

Distributors encountering implementation challenges are encouraged to contact OEB staff as early as possible to discuss available support options. General inquiries may be directed to IndustryRelations@oeb.ca.

Yours truly,

Brian Hewson
Vice President, Consumer Protection & Industry Performance

Appendix A: Data Submission Requirements For Distributors

To support the launch of the Centralized Capacity Information Map (CCIM) platform, all licensed electricity distributors are required to prepare and submit standardized data to the OEB through the OEB's selected platform operator, Planview USL.

1. Required Data Elements

Distributors must provide available capacity data for each primary feeder 4 kV and above within their service area. The following attributes are required:'

Table 1: Required Attributes

Attribute	Unit / Format	Notes
Feeder Name	Alphanumeric	Unique feeder identifier used by distributor (i.e. 21F5 = Pinecrest Feeder 5)
Feeder Line-to-Line Voltage (3-phase)	kV	Required for 3-phase systems
Feeder Line-to-Neutral Voltage (1-phase)	kV	Required for 1-phase systems
Configuration	Category	Indicated as Overhead or Underground for the appropriate segments
Feeder Available Capacity	kVA	Calculated in accordance with guidance: Planning Limit – Peak Load.

Distributors must also provide the platform operator with the URLs of any embedded distributor website links that will be attached within the CCIM.

2. Available Load Capacity Calculation Methodology

Distributors should calculate Available Capacity using the following formula as a general guideline:

Feeder Available Capacity (kVA) = Feeder Planning Limit (kVA) – Feeder Peak Load (kVA)

Feeder Planning Limit should reflect thermal constraints, operational practices, upstream limitations, system constraints, committed/reserved capacity and other conditions.

Feeder Peak Load may be based on the most recent seasonal peak (summer or winter), or a rolling average of previous years' peaks, as determined by the distributor's planning practices.

Distributors are expected to document and apply their chosen methodology consistently across all reported feeders. A description of a distributor's methodology may be requested by OEB Staff from time to time, in order to inform, among other things, understanding of variance in practices and approaches among distributors.

3. Data Format and Submission

Distributors will submit their information through a secure web client that uses SFTP protocol for the data transfer. For troubleshooting or additional support, distributors may contact Mel Buske, Program Manager, Planview USL.

- **GIS-enabled distributors:** Submit spatial capacity data using GeoJson, ACAD, or other ESRI-compatible geospatial formats (.shp, FileGDB, etc). Provide associated data in accordance with Table 1.
- **Non-GIS-enabled distributors:** Submit capacity data in tabular form in accordance with *Table 2: Sample Tabular Data Model,* accompanied by static spatial visual maps, where applicable.

Table 2: Sample Tabular Data Model

Feeder Name	Configuration	Available Capacity (kVA)	3 Phase Line to Line Voltage (kV)	1 Phase Line to Neutral Voltage (kV)
24M10	Underground	3200	27.6	16.0
25M12	Underground	5600	13.8	8.0
24F3	Overhead	7350	13.8	8.0