ONTARIO ENERGY BOARD

Report to Minister

Streamlining Ontario's Electricity Connection Framework

Enabling Growth and Meeting Customer Expectations

December 2025

PREFACE

Ontario

Ontario Energy Board

On June 12, 2025, Ontario's Minister of Energy and Mines issued a Directive to the Ontario Energy Board (OEB) to advance the province's Integrated Energy Plan (IEP) - *Energy for Generations*. The Directive underscores the OEB's critical role in supporting the delivery of affordable, secure, reliable and clean energy as Ontario prepares for a projected 65% increase in energy demand over the next 25 years[1]. Driven by economic growth, electrification of transportation and industry, and a population expected to reach 21 million, this surge in demand makes timely and efficient development of electricity infrastructure essential when it comes to addressing Ontario's housing, transportation and economic needs.

To support more efficient grid-connection processes for load customers, the Directive calls on the OEB to review electricity transmitter and distributor connection procedures and report back to the Minister by December 31, 2025, on the reasonableness of timelines and opportunities to streamline and reduce connection durations.

In response to this request, the OEB has conducted a comprehensive review of customer connection procedures across the electricity sector, including consultations with transmission and distribution stakeholders and support from dedicated Working Groups that helped clarify issues and develop proposed solutions.

Through its consultations, the OEB heard from customers about opportunities to improve connections to both transmission and distribution systems. Key issues included significant delays for large and complex projects; the need for transparency and accountability; the absence of standardized procedures; and insufficient communication from regulated utilities to prospective customers. To further support timely and efficient connections, stakeholders also stressed the need for better coordination between utilities and the Independent Electricity System Operator (IESO). Customers expressed a view that the connection processes should be more customer-focused than they are today.

Because many issues are common to both distribution and transmission connections – and recognizing that some distribution connections can trigger transmission processes – the OEB is submitting a single report that addresses procedures for both. The actions the OEB intends to take are also very similar, focusing on standardizing processes and enhancing transparency. This report presents the results of the OEB's review and the proposed actions, organized into two main parts:

[1] Independent Electricity System Operator Annual Planning Outlook (APO): 2026 Demand Forecasts & 2027 Demand Scenario

Part I: Distributor Connection Procedures Review

Part I addresses IEP Directive # 7, which states:

> *Building on the work the OEB conducted to support the development of Electric Vehicle Charging Connections Procedures, conduct a review of other electricity distributor connection procedures and report back by December 31, 2025, on the reasonableness and timeliness of LDC procedures to connect customers, and opportunities to streamline processes.*

Part I provides an overview of current rules and common practices related to distribution customer connections, summarizes stakeholder feedback on challenges and opportunities and sets out the basis for the following OEB proposals:

1. Develop a streamlined customer connection procedures document
2. Establish a coordinated transmitter-distributor process
3. Provide greater transparency on the connections process
4. Establish reporting and performance measurement.

Part II: Transmitter Connection Procedures Review

Part II addresses IEP Directive # 6 which states:

> *In support of a more efficient grid-connection process for load customers, conduct a review of transmitter connection procedures and report back by December 31, 2025, on the reasonableness of timelines for steps within the connection procedures and opportunities to streamline and reduce overall connection timelines, including efficient coordination between transmitters and IESO, with consideration for potential transmitter performance standards.*

Part II outlines the following proposals to streamline the transmission connections process, reduce overall connection timelines, increase efficiency of coordination between transmitters and the IESO and implement performance standards for transmitters:

1. Formalize a comprehensive and streamlined transmission connection procedure.
2. Establish performance standards along with public reporting requirements for transmitters as part of the transmission connection procedure.

Implementation of these six proposals is anticipated to begin in early 2026, and will involve consultations with customers, distributors, transmitters, the IESO and other relevant stakeholders.

The OEB will develop distribution customer connection procedures and the transmission connection procedure through separate but coordinated processes, working closely with stakeholders. This work will also involve proposing code changes and the development of metrics, standards and any reporting requirements – as needed – to support performance monitoring and ensure accountability. The overall timeline is expected to take approximately 12 months.

Through this report, the OEB also recommends that the government consider developing a coordinated planning framework to support large and complex projects. Such a framework would bring together key participants – including utilities, municipalities and relevant government agencies – to ensure alignment, avoid delays and support more efficient infrastructure development.

Taken together, these proposals are expected to strengthen Ontario's electricity connection framework by promoting consistency, improving service quality and ensuring a customer focused approach. In doing so, they will support the timely delivery of electricity that enables economic growth across the province while ensuring affordability and reliability for ratepayers.

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Part I

Distributor Connection Procedures Review

PART I: DISTRIBUTOR CONNECTION PROCEDURES REVIEW

1 INTRODUCTION

Part I of this report provides an overview of current rules and common practices related to distribution customer connections, summarizes stakeholder feedback on challenges and opportunities, and outlines the OEB's proposals to streamline customer connections.

On July 3, 2025, the OEB issued a letter launching the Distribution Customer Connections (DCC) Review (EB-2025-0204), explaining that to develop its response to the Minister's IEP Directive, the OEB was undertaking a comprehensive review of distributor connection processes and requirements. The letter went on to further outline that the review would assess reasonableness, timeliness and opportunities to streamline and improve connection processes across Ontario.

The DCC Review was coordinated and conducted in parallel with the Transmission Connections Review and other related OEB initiatives, such as the Distributed Energy Resource Connections Review.

To support this work, the OEB established a DCC Working Group – over 30 members representing customers and their associations (including land developers and commercial/industrial customers), licensed distributors and other interested stakeholders. The Working Group met six times between August and November 2025, focusing on opportunities to improve end-to-end connection practices, clarify roles and accountabilities where multiple parties are involved, and support more consistent customer experiences across the province.

In order to collect broader feedback from the sector, the OEB conducted two targeted surveys, one for licensed electricity distributors and the other for load customers. The surveys were designed to gather quantitative and qualitative information regarding current practices, timelines, information needs and those areas where standardization or clearer guidance could reduce uncertainty and delays.

The Working Group discussions and written stakeholder input, along with the survey results, provide the basis for the following four proposed actions which will be implemented through a collaborative approach:

1. Develop a streamlined customer connection procedures document
2. Establish a coordinated transmitter-distributor process
3. Provide greater transparency on the connections process
4. Establish reporting and performance measurement.

The overall implementation of these proposals is expected to take approximately 12 months, beginning with development of the procedures document, followed by any required code changes, reporting requirements, and performance metrics.

2 CURRENT CONNECTION PROCESS AND REQUIREMENTS

The OEB's Distribution System Code (DSC) sets out the minimum obligations that licensed electricity distributors must meet in relation to customer connections, including timelines for key steps, such as responding to customer connection requests and issuing offers to connect.

In addition to timelines, the DSC includes information requirements: offers to connect must include information such as costs and the assumptions behind them, and each distributor's Conditions of Service must set out specific details related to the connection process.

The DSC also outlines other connection related requirements, such as:

- Offer alternative bid options where applicable
- Perform economic evaluation for connections requiring system expansions
- Manage expansion deposits and rebates appropriately
- Plan for future load growth, including enhancements to improve operational performance or address capacity constraints. This planning considers good utility practice, performance-based indices, current service levels, potential improvements and costs to customers.

The following diagram and sections outline the common process steps (Figure 1) that distributors typically follow when connecting customers. While the DSC sets minimum requirements for certain steps, there are variations in how these processes are implemented across distributors in Ontario. Differences may arise based on the distributor's practices, the type of customer and the size of the connection.

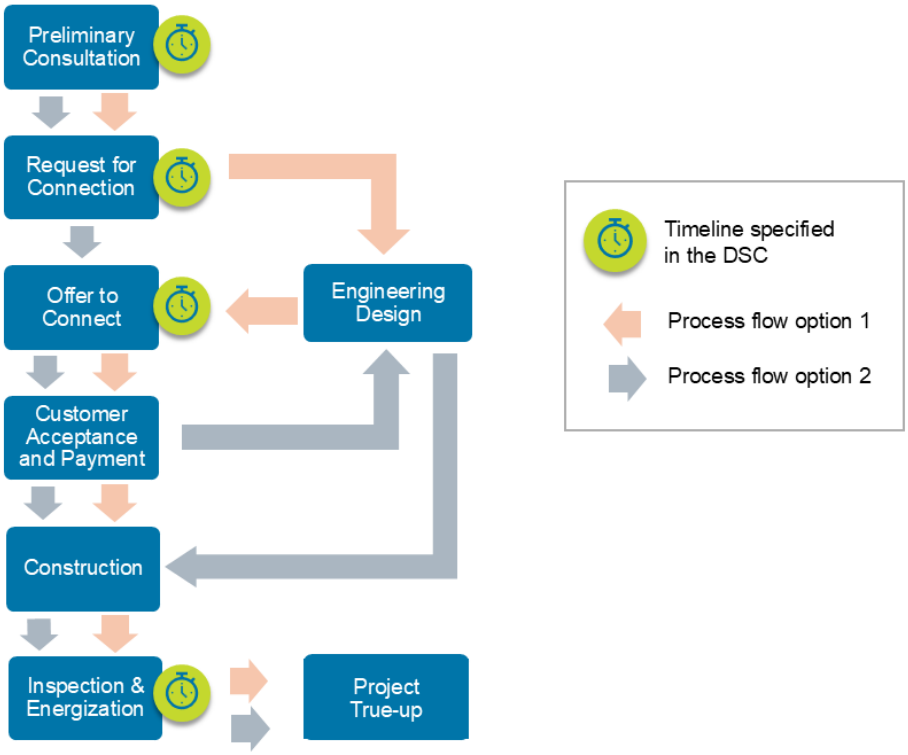

Figure 1 - Overall Connection Process Flow

- **Preliminary Consultation:** Before submitting a connection request, customers may consult with the distributor to review project feasibility, timelines and potential requirements. Under the current DSC, distributors are only required to offer this preliminary consultation when a non-residential Electric Vehicle (EV) charging customer requests the process for one or multiple sites. In these cases, distributors must provide the customer with an EV Preliminary Consultation Report within 15 days. Some distributors have extended this option to other load customers.

- **Request for Connection:** The customer formally submits a connection request to the distributor, initiating the connection process. Under the DSC, distributors must respond to the customer's written request within 15 calendar days.

- **Offer to Connect:** Upon receiving a completed connection request, the distributor must provide an offer to connect within 60 calendar days. The DSC specifies certain information that must be included in the offer, such as any required capital contribution and alternative bid option for certain expansion work. Distributors must provide an initial offer to connect to the customer at no charge.

- **Engineering Design:** Depending on the type of connection project and the practice of individual distributors, engineering design may be completed before the offer to connect is made or after customer acceptance and payment. A detailed engineering design can include system impact assessments, technical specifications, electrical and civil infrastructure design and cost estimates. This step may also involve coordination with municipalities, other utilities and third parties to ensure feasibility of the design. While the DSC does not specify requirements or timelines for this step, distributors are not expected to collect any fees from customers prior to issuing the initial offer to connect, including charges related to engineering design.

- **Customer Acceptance and Payment:** After receiving the offer, the customer may engage in further discussions with the distributor, such as clarifying the scope of work or associated costs. Once the customer accepts the offer and provides any required payment or deposit, the distributor can proceed with detailed engineering or construction planning. The DSC does not specify requirements or timelines for this step.

- **Construction:** This step involves executing the approved design to build the required electrical infrastructure. The DSC does not specify requirements or timelines for this step.

- **Inspection & Energization:** After construction, distributors must complete inspections to confirm compliance with safety and regulatory standards. Once the inspection is completed and all other service conditions are met, the DSC requires the connection to be completed within 5 business days for low-voltage service or 10 business days for high-voltage service.

- **Project True-Up:** The final stage is reconciling actual project costs with initial estimates, with any variances communicated to the customer. The DSC outlines several true-up requirements, such as warranties and return of expansion deposits.

In addition to DSC rules, the OEB issues industry guidance to reinforce requirements of the DSC and strengthen customer connection processes, addressing persistent issues and ensuring distributors understand their regulatory obligations.

In November 2024, the OEB issued a bulletin reminding electricity distributors of their regulatory obligations to ensure timely connections for new load customers, particularly residential subdivisions and large projects. It addresses concerns from developers about delays and inadequate communication, which can increase costs and hinder housing development, and outlines OEB staff expectations for best practices, including: providing detailed project plans to non-residential customers within 45 days of

customers signing the offer to connect, identifying all additional requirements upfront, and assigning a single point of contact for each project. The bulletin also reminds distributors to provide complete and timely information on connection costs and economic evaluations.

In March 2025, the OEB issued a letter to all electricity distributors regarding their obligations under the DSC and the Electrical Vehicle Charging Connection Procedure (EVCCP). In this letter, distributors were reminded that they must provide offers to connect within 60 days of receiving a complete request and to ensure timely connections for EV charging infrastructure.

To further enhance transparency and support planning, the OEB has developed a centralized capacity information map (CCIM). The CCIM provides detailed data about Ontario's electrical grid capacity for both load and DER connections to help support the delivery of affordable, secure reliable and clean energy that enables economic growth across the province. Of particular relevance to customer connections, the CCIM will provide awareness of potential grid locations for activity that would increase electricity demand, such as expanding an industrial facility or connecting a new building.

3 STAKEHOLDER CONSULTATION AND FEEDBACK

Insights from stakeholder feedback revealed two overarching priorities:

1. **A clear, streamlined connection process that is customer-focused and supports growth and development.**
2. **Enhanced communication, coordination and transparency**.

To inform the DCC Review, the OEB undertook extensive engagement with relevant parties (Figure 2). This included Working Group consultations, written submissions and two surveys – a customer experience survey (26 respondents) and a distributor survey (48 respondents). The goal was to understand challenges in current connection processes and provide stakeholders with an opportunity to inform potential solutions. Key challenges and opportunities are outlined below.

Figure 2 – OEB Stakeholder Engagement / Consultation
Distributor Connection Procedures Review

3.1 Connection delays and challenges

Stakeholders consistently identified delays as a critical issue, particularly for large and complex projects such as residential subdivisions, industrial parks and multi-unit buildings. While simple connections generally can be connected in a short period of time, projects requiring distribution expansion or transmission work often extend well beyond expected timeframes.

These delays can result in a variety of consequences for customers, including increased costs, extended reliance on temporary services, delayed occupancy and postponed home closings. For large projects, meeting the DSC's 60-day requirement to issue an initial offer to connect remains a persistent challenge, with delays often continuing throughout subsequent stages of the connection process. Common areas where customers experience delays include engineering design, issuance of the offer to connect and inspections – so both prior to and following construction.

Projects involving upstream upgrades face even longer timelines due to the need for coordination among customers, distributors, transmitters and the IESO. Customers also noted limited visibility into the transmission work and confusion around roles and responsibilities, which compounds delays.

Subdivision connections pose unique challenges compared to other connection types. They typically require early engagement with distributors and municipalities well before

a formal connection request is submitted. Detailed offers to connect often cannot be issued until engineering design is complete, which depends on extensive developer input and can take place over a prolonged period of up to several months. Overall, these projects can span multiple years, with processes varying across distributors – from minimal coordination in smaller or rural distributor areas to extensive multi-stakeholder engagement in urban areas, including integration with municipal planning.

To address these issues, stakeholders expressed a strong desire for earlier engagement prior to submitting formal applications and called for a streamlined connection process that provides clarity and consistency. Stakeholders noted that a more transparent and predictable process would help shorten timelines, reduce unnecessary delays and improve overall customer confidence.

3.2 Consistency and customer communication issues

Stakeholders highlighted significant inconsistencies in the connection practices and requirements among distributors, creating uncertainty and delays for customers. These variations include how information is collected, offers to connect are managed and costs are communicated. Customers often face a lack of clarity at the outset, which can ripple through the entire connection process.

Offer to connect practices are a major source of inconsistency. Although the DSC requires distributors to issue an initial offer to connect within 60 days at no cost, approaches differ widely. Some distributors meet this requirement by providing a preliminary offer to connect with minimal detail, followed later by a more comprehensive version after payment – a process stakeholders view as inefficient. Other distributors require design or material deposits before issuing an offer to connect, which some believe accelerates timelines even though it does not fully align with the DSC. These inconsistencies make it difficult for developers and customers to plan effectively.

Cost transparency was a recurring theme in Working Group discussions and survey responses. Stakeholders emphasized the need for greater visibility into how project costs are estimated and reconciled, including the design assumptions behind them. Customers often face unexpected changes when scope or timelines shift without adequate communication, undermining confidence in the process. Timely updates and detailed cost breakdowns were identified as critical to improving customer satisfaction and reducing disputes.

Customers highlighted inconsistencies in the information required by distributors, including variations in technical requirements for similar connections. Such discrepancies frequently result in delays and increased complexity.

3.3 Need for performance tracking

During Working Group discussions, customers emphasized the need for formal reporting requirements and performance metrics, noting that metrics can drive behavior. For example, existing scorecard measures such as contact timelines may have influenced how distributors prioritize their work.

Distributors cautioned against implementing metrics too quickly, highlighting uncertainty around the future connection framework. They recommended first gaining experience after the new framework is implemented, identifying where delays occur and then designing appropriate metrics and reporting elements.

Conversely, developers argued that delaying metric decisions until after the connection framework is designed could make it difficult to establish meaningful measures later. They supported the OEB identifying upfront which aspects of the connection process may be tracked, even if decisions on how those metrics will be used for formal performance assessment come later.

3.4 Comments on issues beyond the connection process

Through this consultation, stakeholders raised issues related to connections that fall outside the distribution connection process.

Developers noted that misalignment between municipal growth plans and electricity system capacity planning is a major source of delay, particularly in high-growth communities. While connection processes function reasonably well where capacity exists, notable delays arise in areas without sufficient capacity. They highlighted the interdependence of municipal growth planning, subdivision approvals and system capacity planning, with mismatches among these processes being a key driver of subdivision connection challenges.

Stakeholders also pointed to external dependencies that frequently contribute to delays, such as municipal permitting requirements, required inspections, and approvals from other government authorities. They went on to explain that while these factors fall outside the control of distributors, they can significantly affect project timelines, underscoring the need for better coordination among municipalities, regulators and industry participants to reduce friction and improve predictability.

4 PROPOSED ACTIONS

Drawing on stakeholder feedback attributed to this consultation, previous engagements and its compliance work, the OEB has identified key challenges and opportunities with the connection process – a defined need for a more streamlined connection process,

along with enhanced communication and transparency to support a customer–focused connection process.

While the DSC sets minimum requirements and timelines for certain steps in the connection process, significant variations exist among over 50 distributors across Ontario. These variations create significant challenges for customers trying to connect to the distribution system – influenced by individual distributor practices, project complexity and customer type – leading to significant variances in timelines, information provided and the level of engagement offered. Current rules provide only high-level direction for critical steps such as issuing an offer to connect, leaving much to the discretion of the individual distributors.

To address these issues, the OEB proposes collaborating with stakeholders to:

1. **Develop a streamlined connection procedure document** to improve predictability, shorten timelines and support efficient planning and execution of customer connections.
2. **Establish a coordinated transmitter–distributor process** involving customers, distributors, transmitters and the IESO when transmission work is required.
3. **Enhance communication and information-sharing requirements** throughout the connection process to improve transparency, service quality and accountability.
4. **Introduce reporting and performance metrics** to monitor and evaluate the effectiveness of connection processes.

These proposals are explained in the subsections below.

4.1 Develop a streamlined Customer Connection Procedures document

Following a similar approach taken in developing both the Distributed Energy Resources Connection Procedures (DERCP) and EVCCP, the OEB will work with industry stakeholders to establish a **Load Customer Connections Procedure** (LCCP) document under the DSC. This document will include detailed steps, requirements, responsibilities and timelines to connect customers based on varying project complexity. It will aim to improve transparency and predictability for customers and enhance planning and execution of customer connections, which are key customer concerns raised by stakeholders.

The LCCP will introduce greater flexibility for customers throughout the connection process. For example, customers will have the option to engage in early-stage consultations to better understand feasibility, timelines and indicative costs before submitting a formal application. Additionally, to expand customer choice and control

over project timelines, the OEB will review the current eligibility criteria for alternative bid options and consider expanding these options to include work that some distributors have not traditionally offered. The procedure may also allow customers to proceed under provisional cost arrangements when full cost certainty is not immediately available, helping advance projects and shorten timelines. Customers could also pay for certain components, such as materials, based on preliminary estimates that would have clear terms for reconciliation.

To further enhance predictability, the LCCP will establish a structured approach to assigning timelines for certain steps of the connection process, increasing certainty for customers. These timelines will be scaled according to project complexity, whether for simple connections, connections that require distribution system expansions or transmission system upgrades. The OEB recognizes that it may not be feasible to assign timelines to every step.

The LCCP will be designed to balance standardization with flexibility. Information requirements – such as templates or minimum content – will be developed to ensure consistency without imposing unnecessary complexity.

As part of procedure development, the OEB will review the EVCCP to ensure alignment with any new requirements introduced through the LCCP. In addition, the OEB may consider integrating the EVCCP into the LCCP, recognizing that EV charger connections are a subset of load connections.

4.2 Establish a coordinated transmitter-distributor process

Stakeholders in the DCC Working Group highlighted coordination issues when distribution connections potentially require transmission system changes, leaving customers responsible for managing the process. Under the LCCP, the OEB will introduce a **coordination process for distribution customer connections requiring transmitter work**.

This process will ensure structured collaboration between customers, distributors and transmitters from the earliest stages of the process and maintain alignment throughout the entire project lifecycle. It aims to include clearly defined roles, responsibilities, requirements and timelines.

Formalizing this approach will improve transparency and predictability, help manage interdependencies and mitigate risks – ultimately enabling more efficient and timely project execution.

4.3 Enhance communication and information-sharing requirements

To enhance predictability and customer confidence, the OEB plans to establish additional requirements to **enhance communication and transparency** throughout the customer connection process, something customers identified as lacking in the current process with many distributors. Some of these requirements may be incorporated into the LCCP.

The OEB will work with stakeholders to **standardize the exchange of information between customers and distributors** in the connection process. This may involve developing templates or establishing minimum content requirements for key documents such as connection requests, offers to connect and connection agreements. Standardization will help ensure that customers receive clear, consistent and complete information, reducing ambiguity and improving decision-making.

In addition, the OEB will consider requiring **minimum public-facing documentation requirements** to provide customers with greater visibility into the process. This could include publishing process flows, connection requirements and relevant technical guidelines.

To further support planning and coordination, the OEB will look to **develop a guide that helps estimate overall project durations based on categories** such as simple connections, distribution expansions or transmission upgrades. This resource will provide both customers and distributors with a better understanding of expected timelines, improving predictability and facilitating better project management.

Activities under this proposal will be closely linked to the CCIM project to ensure consistency and efficiency in how information is shared and accessed. By implementing these measures, the OEB aims to create a more transparent, standardized and customer-friendly connection process that supports informed decision-making and enhances overall experience.

4.4 Establish reporting and performance measurement

Following the establishment of the LCCP, the OEB plans to **establish additional reporting and record-keeping requirements**, followed by a **set of performance metrics**. These measures will enable the OEB and stakeholders to monitor and evaluate the effectiveness of connection activities, identify areas for improvement, enhance distributor accountability and ensure that customers receive timely and efficient service.

The reporting will capture key indicators such as timeliness, process quality and efficiency. For example, metrics may include adherence to established timelines and variance between estimated and actual costs. Collecting and analyzing this data will

provide valuable insights into how well distributors are meeting performance expectations and where corrective actions may be needed. In addition, record-keeping will ensure that all relevant information – such as project milestones, communication logs and change requests – is documented, supporting disputes and compliance, if needed.

These requirements will form the basis for continuous improvement initiatives, enabling the sector to track progress and share best practices. By embedding performance measurement into the connection process, the OEB aims to create a culture of accountability and deliver a more predictable, customer-focused experience.

5 IMPLEMENTATION OF PROPOSALS

Customers have expressed strong support for developing detailed procedure documentation for greater consistency across distributors and introducing requirements that enhance communication, transparency and accountability. They emphasized the importance of clear performance measures that are publicly reported, noting that collecting and analyzing data can help identify solutions and drive continuous improvement.

Where possible, process and requirements will leverage existing systems and focus on metrics that provide meaningful insights while avoiding unnecessary burdens on distributors.

Distributors, while supportive of guidance that improves clarity, have stressed the need to preserve flexibility and avoid overly prescriptive requirements. They also raised concerns about potential administrative burden and questioned the necessity of ongoing reporting once processes are established.

The OEB will work closely with customers, distributors and other stakeholders to establish the LCCP. The OEB will also propose any necessary changes to the DSC, as well as the development of reporting requirements and performance metrics. Given the extensive consultation needed to design a process and performance metrics that work across different connection scenarios, the overall timeline is expected to take approximately 12 months.

The OEB will maintain open engagement with stakeholders throughout implementation, monitor impacts and make adjustments, as needed, to ensure these changes deliver the intended benefits of improved predictability, efficiency and customer experience.

Part II

Transmitter Connection Procedures Review

PART II: TRANSMITTER CONNECTION PROCEDURES REVIEW

6 INTRODUCTION

Part II of this report provides an overview of the current transmission connection process and summarizes stakeholder feedback. It also outlines the OEB's proposed actions and implementation considerations.

In a letter to the industry dated July 31, 2025 (the July 31 letter), the OEB set out its plan to engage with stakeholders, to inform its response to Item 6 of its IEP Directive.[2]

The OEB first requested industry participants to make written submissions to help the OEB identify the scope of its review. The OEB received four submissions, holding a virtual forum on August 27, 2025, to discuss the submissions and the scope of the review. In the July 31 letter, the OEB also stated that it planned to establish a Working Group, consisting of load customers, transmitters and the IESO to provide advice and inform the OEB's recommendations.

In September 2025, the OEB established the Working Group comprised of representatives from the IESO, Hydro One, Milton Hydro Distribution Inc., Red Jar Energy Partners and the Association of Major Power Consumers in Ontario. Between September and November 2025, five Working Group meetings were conducted to gather detailed input and advice on opportunities to streamline and improve the transmission connection process.

7 CURRENT TRANSMISSION CONNECTION PROCESS REQUIREMENTS

In Ontario, licensed electricity transmitters are accountable for connecting and serving customers. The relationship between the customer and its transmitter begins when a customer first contacts the transmitter to pursue a connection and continues beyond the connection process for the life of the customer's operations. The OEB expects transmitters to provide responsive and effective customer service beginning with the first point of contact and continuing throughout the connection process.

The transmission connection process applies to load, generation and storage connections, and also to many distribution-connected customers. While Ontario has ten licensed transmitters, Hydro One owns most transmission assets and to date serves almost all transmission connected customers. The Transmission System Code (TSC)

[2] Ontario Energy Board. (2025). OEB Launches Review to Streamline Transmission Connection. Engage with Us. July 31, 2025, from OEB Launches Review to Streamline Transmission Connection | Streamlining Transmission Connections | Engage with Us.

sets out rules for transmitters, including a requirement to connect customers without compromising system reliability.

The OEB reviewed the transmission connection process with a focus on the customer perspective. The review highlighted the need for greater transparency, especially for customers unfamiliar with Ontario's electricity system.

7.1 Transmission customer connection process

Based on information provided on the Hydro One and IESO websites, the following table depicts the current transmission connection process as a sequence of discreet steps.[3] Adding the timelines associated with these steps results in a total transmission connection timeline ranging from 33 to 56 months.

Total Timeline: 33-56 months

	Optional Feasibility Studies	Application	SIA	CIA	Connection Cost Estimate	Connection Cost Recovery Agreement	Approvals, Design and Construction	Register and Commission Equipment
Lead	Customer	Customer	IESO	Transmitter	Transmitter	Transmitter	Customer/Transmitter	IESO / Transmitter
Dependencies			1) Complete application 2) Payment of assessment fee	1) Complete application 2) Payment of assessment fee	Payment of estimate fee		Approvals, permits and land matters may be initiated prior to this stage.	
Indicative Timeline (source)			6-9 months (IESO)	3-5 months (Hydro One)	4-8 months (Hydro One)	1 month (or more) (Hydro One)	1-2 years (Hydro One)	7-9 months (IESO)
Completion Milestone		Completion of combined System Impact Assessment (SIA) and Customer Impact Assessment (CIA) application.	1) Final SIA report 2) Notification of Conditional Approval (NoCA) OR Notification of Disapproval with Reasons (NoDR)	1) Final CIA report	Delivery of cost estimate to the connection applicant.	Execution of CCRA	1) Registration with the IESO as a market or program participant	1) Finalize Transmission Connection Agreement with transmitter 2) Connection to IESO-controlled grid

Figure 3: The current transmission connection process based on information provided on the IESO and Hydro One's websites.

- **Optional Feasibility Study**: Before completing a connection application, Hydro One offers customers the option of pursuing a feasibility study.

[3] Independent Energy System Operator (IESO). (n.d.) *Overview of the Connection Process*. Retrieved from Overview of the Connection Process and Hydro One Network Inc. (2015) *Transmission Connection Process*. Retrieved from Transmission connection process | Hydro One.

- **Application:** Customers can request a transmission connection by completing a connection application form which includes the information required for both the transmitter and IESO's connection assessments.

- **System Impact Assessment**: The connection process begins with a System Impact Assessment (SIA) conducted by the IESO. Upon receipt of a SIA request, the IESO is required by the Market Rules for the Ontario Electricity Market[4] and Market Manual for Connection Assessment and Approval (Market Manual)[5], to assess the impact of a project on the transmission system and to identify modifications to the project or system to mitigate adverse reliability impacts.

  The IESO's typical timeline for completing an SIA is 6 to 9 months. The SIA process includes the issuance of a draft SIA report followed by a final SIA report that determines whether a proposed connection is expected to have a material adverse impact on the reliability of the integrated power system.

- **Notification of Conditional Approval**: After completing the SIA and confirming a project is acceptable, subject to implementation of requirements identified in the final SIA report, the IESO will issue a Notification of Conditional Approval to the applicant and transmitter.

- **Customer Impact Assessment**: Based on the SIA, the transmitter conducts a Customer Impact Assessment (CIA) as required in section 6.4.1 of the TSC. The CIA assesses the impact of proposed new or modified connections on existing customers.

- **Connection Cost Recovery Agreement (CCRA):** At this stage of the process, the customer will receive a connection cost estimate. Next, the customer signs the connection cost recovery agreement (CCRA), which outlines the terms and conditions to connect to the transmitter's system. The Market Manual recognizes the execution of a CCRA with a transmitter, within 24 months from receiving the Notification of Conditional Approval as a milestone for a project.[6] As indicated in Hydro One's Transmission Connection Procedures, a customer that has a signed

[4] Chapter 4, Section 6.1.5 - https://www.ieso.ca/-/media/files/ieso/document-library/market-rules-and-manuals-library/market-rules/mr-chapter4.pdf
[5] Section 5 - https://www.ieso.ca/-/media/Files/IESO/Document-Library/Market-Rules-and-Manuals-Library/market-manuals/connecting/caa.pdf
[6] Independent Electricity System Operator (IESO). *Market Manual for Connection Assessment and Approval*, Section 3.4 "Milestones for Projects." Retrieved from https://www.ieso.ca/-/media/Files/IESO/Document-Library/Market-Rules-and-Manuals-Library/market-manuals/connecting/caa.pdf

contract with Hydro One for capacity at a connection facility will be recognized to have contracted capacity.[7]

- **Approvals, Design and Construction**: The next step in the process involves obtaining approvals and permits from external authorities and the physical aspects of the project, concluding with the construction of the connection. The period between the signing of the CCRA and the completion of construction is the longest step and also has the most variable duration, depending on the customer's specific connection.

- **Register and Commission Equipment**: When construction is complete, the IESO will register the new equipment and test and commission the new or modified connection prior to granting the final approval to connect to the IESO-controlled grid.

7.2 Hydro One Customer Connection Experience

During the OEB's Working Group meetings, Hydro One presented examples of the actual timeline to process six new load connection applications completed between 2020 and 2025, which can be seen in Table 1:

	Industry	Capacity Requested (MW)	SIA/CIA Timeline (months)	Connection Cost Estimate Timeline (months)	Construction Timeline (months)	Total Timeline (from SIA/CIA to in-service date of the connection) (months)
1	Agriculture	50	3*	0	28	31
2	Chemicals	39	11	7	23	52
3	Manufacturing	27	12	0	18	25
4	Manufacturing	150	20**	12	23	28
5	Mining and Extraction	33	17	14	25	54
6	Mining and Extraction	72	10	21***	48****	71

Table 1: Examples of transmission connection timelines (between 2020-2025) provided by Hydro One.
Table 1 - Notes:

[7]Hydro One Networks Inc. (2015). *Transmission Connection Procedures*. Updated November 18, 2015. Retrieved from https://www.hydroone.com/businessservices_/Documents/Transmission%20Connection%20Procedures_Updated%20-%20Nov%2018%202015.pdf

- Timelines above can be impacted by many factors, including complexity of connection, contractual negotiations, customer timelines, required approvals and risk tolerance.
- Total timeline refers to the time taken from the SIA stage to in-service date of the connection, which includes time between phases for negotiations with customers and approvals.
** Connection was assessed two years prior but did not proceed. When they decided to, SIA/CIA was refreshed, requiring less time*
*** Complex connection resulted in extended SIA timeline*
**** Hydo One prepared two iterations of estimate at Customer's request*
***** Construction during COVID, complexity of connection, approvals and customer delays impacted timeline*

The data in Table 1 indicates the duration of various phases of the connection process, including the SIA and CIA, connection cost estimate, construction and the total timeline from the commencement of the SIA and CIA phases to the in-service date of the connection. Hydro One explained that its current approach is to endeavor to align connection timelines with customers' targeted schedules.

Although the transmission connection process is typically depicted as a series of independent phases with separate timelines, Hydro One noted that there are instances where a phase can be initiated before the previous phase is complete.
For example, the CIA can often be initiated after the draft SIA report is issued by the IESO and the connection cost estimate can in some cases be initiated before the impact assessments are complete. Hydro One noted that this approach introduces risk for the applicant, as changes between draft and final SIA reports may alter connection requirements, potentially negating any benefit of working ahead.

The potential for overlapping phases explains why, in most of the examples in Table 1, the sum of individual phase timelines exceed the total timeline. For other examples in Table 1, the same discrepancy is due to additional time taken in between phases for negotiations and approvals, which also contributed towards the total timeline. Table 1 also indicates that the total timeline to complete these new connections ranged from 31 to 71 months, with the 18- to 48-month timeline of the construction step being a major contributor to the total timeline of these projects. These examples also highlighted that the time required to complete a SIA and CIA ranged from 3 to 20 months, due to specific application circumstances.

The OEB notes that, although the proposed timeline for the transmission connection process, based on the information provided in Figure 3, range from 33 to 56 months including 6 to 9 months to complete a SIA and an additional 3 to 5 months for CIA, the examples provided in Table 1 suggest that these timelines could fluctuate beyond those ranges based on the complexity of the project, contractual negotiations, customer timelines, required approvals and risk tolerance, among other factors.

8 STAKEHOLDER FEEDBACK

To support its work the OEB undertook engagement activities with relevant parties (Figure 4), including written submissions, a virtual forum and Working Group consultations. Input received has provided the OEB with insight into the challenges currently experienced by customers that want to connect to Ontario's transmission system as well as suggestions for improvements.

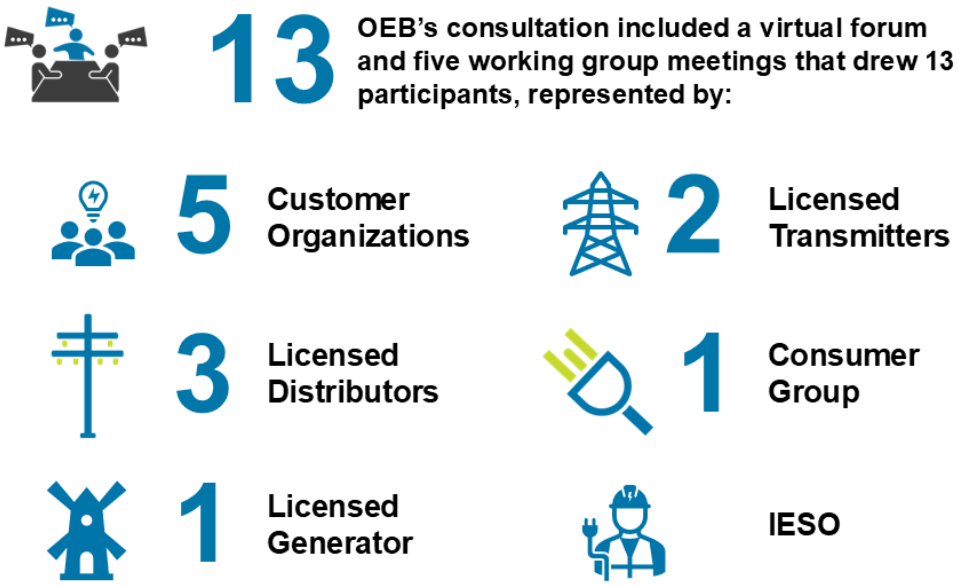

Figure 4 – OEB Stakeholder Engagement / Consultation
Transmission Connection Procedures review

8.1 Need for a customer-centric, efficient and transparent process

The OEB heard from working group members that the existing process is IESO and transmitter-centric, whereas it should be customer-centric. Transmission-connected customers indicated that the transmission connection process could be more efficient and that timelines for completing connections could be shortened. Customers also suggested that the process would benefit from greater clarity and transparency through the introduction of performance standards for transmitters and annual reporting on connection timelines.

8.2 Benefits of early access to information

To decide whether to pursue a transmission connection in Ontario, customers require information on feasible connection options, estimated costs, and expected timelines. Ideally, this information should be available prior to the completion of a transmission connection application to minimize changes later in the process. Currently, customers often only learn about available options after the SIA has begun. The OEB also heard

that cost information is typically not provided until the connection cost estimate is completed.

8.3 Impact of application changes on timelines

The OEB heard that the timeline to complete a SIA and CIA can be significantly delayed if customers modify application data after assessments have started, triggering the need for reassessment. However, customers expressed concerns that relatively limited changes in information often result in restarting the assessment timeline from the beginning, which seems excessive. Customers emphasized that the impact on the assessment timeline should depend on the nature and timing of changes.

Providing customers with key information earlier in the process would enable them to focus on their preferred connection options, reducing the need to assess multiple options and streamlining the overall connection process.

8.4 Factors affecting connection timelines

Hydro One noted that connection timelines vary based on factors such as project size, capacity requirements, and proximity to the existing transmission system. Smaller projects and those located closer to the system generally require less time. Construction timelines are heavily influenced by component procurement, with larger and more complex projects requiring longer lead times. Additionally, non-electrical approvals – such as environmental and permitting approvals that scale based on the length of the connection line and which are outside the transmitter's control – can significantly affect overall timelines. Customers advised that project specific factors should influence the timeline expectations set for customers on a project-by-project basis.

8.5 Recommendations for pre-application engagement

Working Group members advised that a formalized pre-application meeting between the transmitter, IESO and the applicant should be established. The purpose for this meeting would be to improve the quality of applications and minimize follow-up and option evaluations after the SIA has commenced.

The proposed agenda for this meeting would include discussions on connection options, configurations and other technical details between the applicant and noted parties. Additionally, Working Group members suggested that transmitters should be required to share indicative cost information with the applicant – based on similar recent transmission connections – during the meeting.

8.6 Need for detailed process documentation

Working Group members recommended that a more detailed and holistic view of the connection process be created by transmitters and the IESO, including steps within the SIA and CIA and their interdependencies. This would enable the IESO and transmitters to depict the extent to which these assessments can overlap, such as initiating the CIA based on the draft SIA report or initiating the connection cost estimate before the impact assessments are complete. Any such depiction should include an explanation of the risks customers assume when initiating a step before all precursor steps are complete.

Members also suggested identifying the information required for each step in the assessment process. This would help applicants understand the implications of modifying application details at various points and the risks associated with initiating an application based on preliminary or uncertain information.

8.7 Performance standards for transmitters

The Working Group recommended introducing a performance standard for the period between receipt of a complete application and completion of the CCRA. This period encompasses the SIA, CIA, cost estimate and CCRA steps, which – subject to timely completion of the SIA by the IESO – are timelines under the transmitter's control.

9 PROPOSED ACTIONS

Based on stakeholder feedback, the OEB proposes two strategic actions to streamline the transmission connection process:

1. Formalize a comprehensive transmission connection process and
2. Establish performance standards for transmitters

These proposals are explained in the subsections below.

9.1 Formalize a comprehensive transmission connection process

The OEB understands that each step in the existing transmission connection process is critical to ensuring the reliability and safety of Ontario's transmission system.
The OEB expects the transmission connection process to be an optimized, efficient approach that reflects reasonable efforts by a transmitter and the IESO to minimize the overall connection timeline.

Recognizing this, the OEB proposes the **development of a comprehensive transmission connection process, referred to as a Transmission Connection**

Procedure (TCP). The TCP (Procedure) would be the primary reference used by customers regarding the transmission connection process.

To implement the new connection process, the OEB also proposes amending the TSC to require transmitters to adhere to the Procedure. The OEB would expect the IESO to align its connection-related activities with the Procedure. To ensure transparency, transmitters would be required, through the TSC amendment, to share the Procedure on their respective websites.

Pre-Application Information Sharing

To facilitate customers' initiating a connection, **the OEB will include a pre-application conference option** for prospective connecting customers in the Procedure. This meeting should be scheduled within a certain timeframe of a customer Preliminary Information Request Form submission. Obtaining such pre-application information would provide customers with a better understanding of connection options and considerations. In cases when the transmission assessment is prompted by a distribution customer connection, that customer should have the option of initiating a pre-application conference and both the distributor and the distribution customer should attend the conference.

Prior to customers submitting a connection application, the OEB expects transmitters to provide preliminary connection cost information, based on the transmitter's experience with similar projects. The transmitter should provide preliminary connection cost information to the applicant at the pre-application conference based on the transmitter's cost libraries of comparable projects.

Post-Application Multi-Party Meetings

The Procedure should also include a **schedule for meetings between the transmitter, IESO, and customer** at key points in the connection process. The first multi-party meeting should be held shortly after an application has been submitted. In cases when the transmission assessment is being prompted by a distribution customer connection, that customer should be invited to the multi-party meetings, in addition to the distributor.

9.2 Establish Performance Standards for Transmitters

In response to stakeholder concerns about the timeliness of the transmission connection process, the OEB will **establish performance standards for transmitters** as part of the Procedure.

Stakeholders informed the OEB that the overall connection timeline of 33 to 56 months currently stated to prospective customers is conservative, as data shows that some connections can be achieved in less than 33 months. In addition, while transmission

connection timelines range significantly depending on the complexity of the project, presenting a large range to prospective customers is not meaningful. The OEB's performance standards will set ambitious, yet typically achievable target timelines for transmitters, so that an individual customer is not responsible for driving efficiencies by setting a timeline expectation for the transmitter.

In developing performance standards, the OEB understands that a connection applicant may want to change information in its application after the SIA has started. The performance standards should include a clear description of circumstances beyond the control of the transmitter and/or IESO that would delay the process and provisions for pausing the process if those circumstances arise.

To monitor transmitter performance, the OEB will also **develop required reporting** by transmitters against the performance standards annually as part of the OEB's Electricity Reporting and Record-keeping Requirements. This annual reporting will increase transparency regarding customers' connection experience.

10 Implementation of Proposals

The OEB intends that an industry Working Group, facilitated by OEB staff and consisting of customer representatives, Hydro One, the IESO and other interested licensed transmitters, develop the comprehensive process and support development of appropriate performance standards. Stakeholders would have the opportunity to comment on the Procedure as part of the TSC amendment process. The OEB expects this entire process to take approximately 10 months.

The industry Working Group will be tasked with producing a process map that:

- Organizes activities, information flows and milestones leading to the key process deliverables and
- Identifies accountability for each activity or for the provision of required information.

Transmitters and the IESO should identify the steps that can be completed simultaneously, resulting in a holistic, optimized process that can be applied consistently for all customers. The industry Working Group will also develop the pre-application Preliminary Information Request Form and will define the purpose and objectives of each post-application multi-party meeting, based on its timing in the process.

The OEB plans to ask the industry Working Group for advice before determining the performance standards. The OEB understands that each transmission connection is unique and the time required to complete transmission connections cannot be

standardized to one timeline. The industry Working Group will develop criteria for low, medium and high complexity connections and determine a performance standard for each complexity category for the period between the receipt of a complete application and the completion of a CCRA. These performance standards will encompass the time required for the IESO to complete the SIA steps and will need to align with the IESO's process.

The industry Working Group will also consider whether the process can include an expediting option(s) and an associated fee, if required, for applicants willing to accept certain risks and identify the risk-adjusted timelines.

RECOMMENDATION TO THE MINISTER

In addressing the broader challenges and opportunities identified through the distribution and transmission connection reviews, stakeholders have emphasized that other approval authorities play a significant role in the customer connection process, often influencing project timelines in ways that utilities alone cannot control. Feedback from the distribution and transmission Working Groups indicate that many challenges facing large and complex projects extend beyond the utility–customer relationship and are rooted in how municipal planning, permitting and other authorities which intersect with electricity connections. Customers and distributors noted that subdivision developments and major infrastructure projects typically involve multiple parties and interdependencies, many of which cannot be fully addressed through changes to the DSC alone.

This feedback suggests the need for a broader, government-led coordination framework that brings together utilities, municipalities and other public bodies to streamline processes and reduce delays.

Accordingly, the OEB recommends that the provincial government consider developing such a framework to support large and complex projects. This framework could include structured engagement protocols, defined timelines for municipal and agency approvals and mechanisms for resolving interdependencies between electricity infrastructure and other development requirements. Key participants may include utilities, municipalities and relevant government ministries, such as the Ministry of Transportation (MTO), among others.

Establishing this framework would also align with recent discussions from the Ministry’s housing and electricity growth forum, reinforcing the importance of integrated energy planning to deliver affordable, secure, reliable, and clean energy that supports economic growth across the province.

CONCLUSIONS

Ontario’s growing electricity demand, driven by economic development and electrification, requires a connection framework that is timely, transparent and customer-focused. This review confirms the need for clear and streamlined processes supported by clear accountabilities, early engagement and robust performance measurement. The OEB’s proposed actions – including formalized development of Distribution and Transmission Connection Procedures, enhanced coordination between distributors and transmitters, improved communication and transparency and the introduction of reporting and metrics – are designed to address these challenges and deliver more effective, timely customer connections.

Successful implementation will require collaboration among utilities, customers and other stakeholders. In doing so, embedding flexibility, accountability and transparency into the connection process will enable Ontario to align infrastructure development with economic growth, shorten connection timelines and accelerate progress toward the province’s energy transition objectives.

APPENDIX I – WORKING GROUP MEMBERS

DCC Working Group Members	Streamlining Transmission Connections Working Group Members
Alectra Utilities Corporation	Association of Major Power Consumers in Ontario
Building Industry and Land Development Association (BILD)	Hydro One Networks Inc.
Canadian Charging Infrastructure Council (CCIC)	Independent Electricity System Operator
Chestnut Hill Developments	Milton Hydro Distribution Inc.
Consumers Council of Canada (CCC)	Red Jar Energy Partners
Corner Stone Hydro Electric Concepts (CHEC)	
Cortel Group	
DG Group	
Electricity Distributors Association	
Elexicon Energy Inc.	
Enbridge Gas Inc.	
Energy Probe Research Foundation	
Energy Storage Canada	
Environmental Defence	
ENWIN Utilites Ltd.	
Fieldgate Developments	
GrandBridge Energy	
Great Gulf	
Hydro One Networks Inc.	
Lakeland Power Ltd.	
London Hydro Inc.	
Lormel Homes	
Malone Given Parsons	
Mattamy Homes	
Oakville Hydro Electricity Distribution Inc.	
Ontario Energy Association	
Primary Engineering and Construction	
Quinte Manufacturers Association	
RTG Systems Inc.	
School Energy Coalition	
Toronto Hydro-Electric System Limited	
Yonge Steeles Landowners Group	