

Regional Electricity Planning – Windsor-Essex

Engagement Plan

Background

This Engagement Plan outlines the background, objectives and proposed timelines to engage with communities and other interested parties in the development of an electricity plan –Integrated Regional Resource Plan (IRRP) – for the Windsor-Essex region.

Examples of the input the IESO is seeking to inform the IRRP include:

- Information to inform the electricity demand forecast and needs of the area including details about economic development, projected growth and planned energy projects and initiatives
- Local options that might address needs identified within the planning period – over the near term (up to five years) to medium term (up to 10 years)
- Opportunities to align future goals within community energy plans, community-based energy solutions, and other economic development plans for consideration in the medium to long term (up to 20 years)

All interested parties are invited and encouraged to participate in this engagement initiative. Interested parties may include, but are not limited to, local municipalities, Indigenous and Métis communities, businesses, stakeholders and members of the general public.

This engagement plan may be subject to review and update as the process evolves.

ABOUT REGIONAL ELECTRICITY PLANNING

Regional electricity system planning is about identifying and meeting local electricity needs to ensure the reliability of electricity supply in each of the 21 electricity regions across the province. Planning for each region involves the creation of a 20-year outlook, considering the region's unique needs and characteristics, conservation initiatives and opportunities, local generation, transmission and distribution, and innovative resources. Regional planning is, however, only one part of system planning, which includes bulk and distribution system planning that also has the goal of maintaining a reliable and cost-effective electricity supply.

Each of these regions goes through a formal planning process at least once every five years, though at different times. The process unfolds differently each time depending on the region's unique needs and concerns. The Ontario Energy Board (OEB) requires an IRRP to be completed within 18 months following the determination that an IRRP is necessary.

More information about the regional electricity planning process can be found in the Appendix.

REGIONAL ELECTRICITY PLANNING IN WINDSOR-ESSEX

The Windsor-Essex region, shown in Figure 1 below, consists of the City of Windsor, the Municipality of Leamington, the Towns of Amherstburg, Essex, Kingsville, Lakeshore, LaSalle, Tecumseh, and the Township of Pelee, as well as the western portion of the Municipality of Chatham-Kent. The region also includes a number of Indigenous communities including Aamjiwnaang First Nation, Chippewas of Kettle and Stony Point First Nation, Munsee-Delaware Nation, Oneida Nation of the Thames, Chippewas of the Thames First Nation, Caldwell First Nation and Walpole Island First Nation. For electricity planning purposes, the region is defined by electricity infrastructure boundaries, not municipal boundaries. The Windsor-Essex region, shown in Figure 1 below, is one of seven planning regions in Southwest Ontario, adjacent to the Chatham-Kent/Lambton/Sarnia region to the east.

This region, shown in Figure 1 below, is served by five local distribution companies (LDCs) and the lead transmitter who form part of a Technical Working Group (TWG) tasked with developing the IRRP: Enwin, Essex Powerlines, E.L.K. Energy, Entegrus, and Hydro One (Transmission and Distribution). Enwin and Hydro One Distribution are directly connected to the transmission system, while the three other LDCs have low voltage connections to Hydro One distribution feeders.

Figure 1. Electricity System in the Windsor-Essex Region



The current regional planning cycle began with the [Needs Assessment](#) report published by Hydro One in February 2023, which identified areas that require further review and assessment and may need to be coordinated with broader regional planning.

Following the Needs Assessment, the IESO engaged on and led the development of the [Scoping Assessment Outcome Report](#) that was published in May 2023. The report determined that a comprehensive and integrated approach is needed to address local identified needs. The TWG led by the IESO will develop this IRRP by taking into consideration input from communities and stakeholders.

The IRRP will include recommendations to maintain reliability of supply to the region over the next 20 years (2023-2042). To develop the IRRP, the TWG will work to gather data, identify needs and issues, examine integrated options, recommend actions, and develop an implementation plan.

The goal of the IRRP is to illustrate the integration of forecast electricity demand growth, conservation and demand management (CDM) with transmission and distribution system capability, relevant community plans, other bulk system developments, and the potential of distributed energy resources (DERs). Both non-wires and wires solutions will be examined and communities and stakeholders will be engaged on the options.

The previous cycle of regional planning for the Windsor-Essex region was carried out during 2017-2019. An IRRP was released that identified new electricity system needs, particularly in the Kingsville-Leamington area, where indoor agriculture growth is leading to unprecedented demand, and makes recommendations for addressing local capacity, load security and restoration, as well as end-of-life asset replacement needs for the near, mid and long term. Further, the IESO undertook an Addendum 2023 Windsor-Essex IRRP Engagement Plan – December 2023

to the IRRP to explore possible solutions on the region's existing 115 kV network. Further details about previous cycle recommendations are summarized in the 2023 [Windsor-Essex Scoping Assessment Outcome Report](#) (Section 3.2), which includes a combination of wires and non-wire recommendations.

More details can be found on the Windsor-Essex regional planning [webpage](#).

Windsor-Essex Integrated Regional Resource Plan

The TWG is responsible for gathering data and assessing the adequacy and security of the electricity supply to the region, and, through this engagement, recommending an integrated set of actions to meet the needs of the region.

Their work is intended to focus on, but is not limited to the following areas, as outlined in the 2023 Windsor-Essex Scoping Assessment Outcome Report (Section 3.3):

- Station capacity needs in the Kingsville-Leamington area
- Load restoration and supply security in the Leamington area
- Station capacity needs in the Windsor area, and
- Station capacity needs in the Lakeshore area.

Through the IRRP process additional needs may be identified or the ones identified may be revised.

ENGAGEMENT OBJECTIVES AND SCOPE

The objective of this engagement plan is to ensure that interested communities and stakeholders understand the scope of the IRRP and are in a position to provide input into the development of the document.

The IESO is seeking input to ensure the IRRP:

- Aligns with community perspectives on local needs
- Incorporates options to meet the growing electricity demand in the Windsor-Essex region taking into consideration local energy priorities
- Ensures a reliable source of electricity in the region over the next 20 years.

As a general principle in engagement, the IESO strives to make useful information available throughout the development of an IRRP to enable meaningful feedback to the process and decisions to be made. Through the planned initiatives to engage communities and stakeholders, the IESO will seek input on:

- Local and regional growth and economic development
- Plans and projects that may have an impact on local growth rates and electricity demand (e.g. regional transit expansion, electrification, large incremental loads connecting to the system, significant DER projects, etc.)
- Options for addressing local electricity needs, including non-wires alternatives (e.g., CDM and DERs) and local support and interest for developing those options in the near- (five year), medium- (10 year) and long-term (20 year)

- Information from municipal plans including the implementation of those projects that could impact electricity use, specifically from community energy plans, energy reporting/CDM plans, official plans and secondary plans

Topics out of scope for discussion include:

- Projects and plans already underway as part of the previous planning cycle
- Policy-level decisions or direction
- Provincial procurements
- Existing program rules
- Local connection requirements of any individual projects unless there is an opportunity to align with broader regional needs

INTERESTED PARTIES

Input into the development of the IRRP is encouraged and welcomed from any community members or interested stakeholders, however, those that may be particularly interested include:

- Municipalities (e.g., elected officials and staff in planning, sustainability, climate change and economic development)
- Indigenous and Métis communities
- Consumer groups and associations (e.g., community/resident associations, business improvement areas, home builders' associations, etc.)
- Economic development agencies, local boards of trade and/or chambers of commerce
- Academia and research organizations (e.g., colleges and universities)
- Environmental groups and associations
- Other public sector organizations (e.g., hospitals and school boards)
- Energy service providers
- Generators
- Businesses and other private entities

The IESO will also conduct targeted outreach to specific stakeholders and communities where unique local needs and issues need further investigation. The content and outcome of these discussions will be shared through the other activities that will be undertaken as part of this engagement initiative.

APPROACH AND METHODS FOR DEVELOPING THE IRRP

Any engagement with communities and interested stakeholders will be conducted in accordance with the IESO's [Engagement Principles](#).

This is a public engagement process. A [dedicated engagement webpage](#) will house all of the information for the IRRP while the plan is in development. Engagement sessions will be held throughout the engagement initiative to keep all interested parties informed and provide opportunities to provide input into IRRP development. Typically, engagement sessions are carried out at three major junctures during IRRP development:

- First engagement on the draft engagement plan and the regional load forecast
- Second engagement on the defined needs and potential options; and
- Third engagement on the options evaluation and draft recommendations.

A feedback form will be provided for interested parties to provide their input typically over a three-week period for consideration in the planning process. Written feedback will be posted (with consent) along with IESO responses on the engagement webpage.

In addition to public engagement sessions, one-on-one discussions with key communities and stakeholders, as identified, may take place to help progress through each stage of the IRRP.

Following completion of an IRRP, the full report, including all accompanying appendices and associated datasets, will be archived on the IESO's Windsor-Essex regional planning webpage. A full schedule of these items is provided below:

PROPOSED ENGAGEMENT SCHEDULE

| Date | Event/Objective | Expected Actions/Notes |
|------------------------------|--|---|
| June to November 2023 | One-on-one discussions with key communities and stakeholders, as identified | <ul style="list-style-type: none"> • Seek input on needs and development to inform demand forecasts • Consider input to inform next engagement phase |
| November 2023 | IRRP engagement launches | <ul style="list-style-type: none"> • Register to attend public webinar #1 |
| December 2023 | Public Webinar #1: <ul style="list-style-type: none"> • Summary of input from targeted discussions • Provide update on planning activities underway • Summarize preliminary regional demand forecasts, draft engagement plan | <ul style="list-style-type: none"> • Seek input to inform electricity demand forecast • Seek input on draft engagement plan • Post feedback and IESO response to feedback, including rationale |
| January 2024 | Feedback due for Public Webinar #1 | <ul style="list-style-type: none"> • Feedback posted |
| 2024 | One-on-one discussions with key communities and stakeholders, as identified | <ul style="list-style-type: none"> • Seek input on local priorities, preferences and development to inform potential needs and solutions • Consider input to inform next engagement phase |
| 2024 | Public Webinar #2: <ul style="list-style-type: none"> • Summary of input from targeted discussions • Overview of defined needs and range of potential options/solutions to be examined | <ul style="list-style-type: none"> • Seek input on options and potential solutions to be examined • Post feedback and IESO response to feedback, including rationale |
| 2024 | One-on-one discussions with key communities and stakeholders, as identified | <ul style="list-style-type: none"> • Seek input on local priorities, preferences and development to inform recommendations |

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| | | <ul style="list-style-type: none"> • Consider input to inform next engagement phase |
| 2024 | <p>Public Webinar #3:</p> <ul style="list-style-type: none"> • Summary of input from targeted discussions • Overview of options analysis and draft IRRP recommendations • Discuss considerations for communities and interested parties to consider in the medium-to long-term planning | <ul style="list-style-type: none"> • Seek input on proposed recommendations • Post feedback and IESO repose to feedback, including rationale |
| Q4 2024 | <ul style="list-style-type: none"> • Finalize IRRP | <ul style="list-style-type: none"> • Post final report online • Engagement will close but the webpage will remain live for one year • Conduct survey on engagement process |

Windsor-Essex IRRP Engagement Appendices

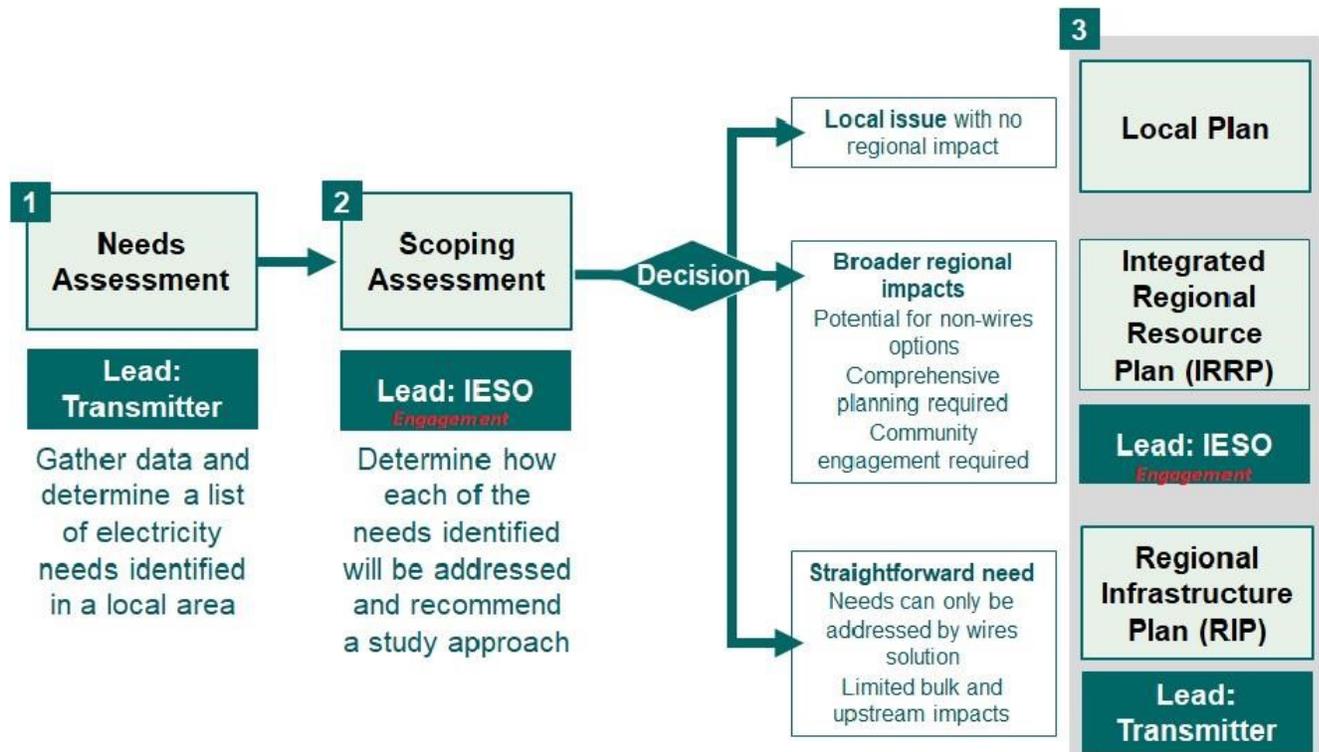
Appendix

Regional Planning Process

Regional planning is ongoing, with electricity reliability evaluated at least once every five years in each region. Community engagement is a critical part of the planning process and the IESO encourages all interested parties to join this discussion to:

- Learn more about the regional planning process and local electricity needs
- Provide input into shaping a community's electricity future by discussing options for meeting local needs, including applicable non-wires alternatives, and discussing the local community's support for development of these options
- Share perspectives for future growth in the area, and how to work together to shape the area's future electricity supply
- Determine opportunities for coordinating and aligning local planning activities and initiatives with the regional planning process

The following diagram illustrates the steps, parties and outcomes of the regional planning process.



For more information, visit the Regional Planning Process webpage at:

<https://www.ieso.ca/en/Get-Involved/Regional-Planning/About-RegionalPlanning/How-the-Process-Works>

Regional Planning Information and Data Availability

Table 1 describes the categories of regional planning information and data and the opportunity for input and timing in which it is typically made available during an IRRP.

Table 1 | Summary of Regional Planning Information

| Data | Description of Data | Opportunity for Input | Details Regarding Input/Availability |
|-----------------------------|---|-----------------------|---|
| Regional Planning Dashboard | Provides comprehensive overview and status update of the various regional planning activities across Ontario, including the planned engagements for the next two quarters | No | Updated biannually and available for download on the IESO website: Regional Planning (ieso.ca) |
| Engagement Plan | Describes number of engagements and topics to be discussed at each engagement | Yes | Draft engagement plan posted prior to first IRRP engagement; the final engagement plan is published following a comment period |

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| Planning Assessment Criteria | Technical requirements and performance criteria used to determine needs, including load supply, load security, load restoration etc. | No | Referenced in the IRRP report; and available in the IESO's Market Rules & Manuals Library: Market Rules & Manuals Library (ieso.ca) |
| Load Forecast (PDF) | LDC's methodologies for forecast development; and methodologies for considering the contribution of energy efficiency savings and embedded generation resources | Yes | High-level summary provided at first IRRP engagement to solicit input on load forecast; detailed methodologies are published with the IRRP report |
| Load Forecast (Spreadsheet) | Forecast annual station peak electricity demand (in megawatts), power factor assumptions; information is subject to redaction and/or aggregation to protect against identifying specific customer electricity usage | Yes | Overview of preliminary forecast is delivered with first IRRP engagement; draft data published following engagement comment period; final dataset published with IRRP report |
| Load Forecast – Energy Efficiency (Spreadsheet) | Forecast of annual peak demand reductions from energy efficiency (in megawatts), at a level of granularity consistent with the forecast annual station peak electricity demand | No | Provided with the forecast annual station peak electricity demand (draft data after the first engagement, and final data with IRRP report) |
| Load Forecast – Embedded Generation (Spreadsheet) | Forecast of annual peak demand reductions from embedded generation resources (contracted embedded generation, in megawatts), at a level of granularity consistent with the forecast annual station peak electricity demand | No | Provided with the forecast annual station peak electricity demand (draft data after the first engagement and final data with IRRP report) |
| Historical Demand | Historic electricity demand data (in megawatts), may be summer, winter, or both depending on peak load characteristics of the region, and may include select years and/or focus on select stations/areas; information is subject to redaction and/or aggregation to protect against | Yes | Data posted prior to first IRRP webinar to solicit input on load forecast; published with the IRRP report |

identifying specific customer electricity usage

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| Transmission end-of-life (EOL) Information | Asset age data for major transmission facilities owned by Hydro One; a ten-year outlook of other transmission asset owner EOL information to be provided as part of the Needs Assessment at the outset of each regional planning cycle | No | Hydro One data is updated every five years and is available to interested stakeholders via the IESO website; a consolidated list of EOL information for all transmission asset owners will be updated annually |
| Transmission System Assumptions | Includes transmission facilities assumed in the IRRP analysis such as new facilities and expected in-service dates, transmission infrastructure ratings (e.g., line conductor, transformer ratings, etc.), seasonality, etc.; some information may be redacted to mitigate potential system security risks | No | Facilities in scope of the IRRP and expected in-service dates are published in the Scoping Assessment Outcomes Report that precedes the IRRP, with additional detail published in the IRRP report |
| Resource Assumptions | May include operational assumptions such as hydroelectric output, capacity factor assumptions, power factor assumed in the analysis, etc. Operational performance of individual facilities may be deemed commercial sensitive | No | General and/or aggregate assumptions by resource type are published with the IRRP report |
| Planning Scenarios | Planning contingencies studied in the analysis; some contingencies and extreme events are subject to redaction to mitigate potential system security risks | No | Summary published with the IRRP report |
| System Needs | Summary of needs identified, timing and location of needs, including any applicable capacity requirements, EOL considerations, load restoration and supply security needs, etc. | No | Presented in materials provided in advance of the second IRRP engagement about the needs identified in the region; and published with the IRRP report |

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| Non-Wires Options Evaluation (PDF) | Energy efficiency potential for areas with system needs, if applicable as a feasible option (annual and/or cumulative potential, in kilowatts and/or megawatts); sources of energy efficiency information and data | Yes | Preliminary information discussed at the third engagement with opportunity for stakeholders to provide feedback; and published with the IRRP report |
| Non-Wires Options Evaluation (Spreadsheet and/or PDF) | Detailed characterization of system needs, i.e., load and energy not served, for areas with system needs where non-wires options are feasible (for select years within the study period, in megawatts); information is subject to redaction and/or aggregation to protect against identifying specific customer electricity usage | Yes | Summary provided with engagement materials prior to the third engagement, where options are presented and discussed; draft data provided following comment period; and final data published with the IRRP report |
| Economic Assessment Assumptions | <p>Cost of each alternative considered, expressed in terms of Net Present Value; and including assumptions such as the following:</p> <ul style="list-style-type: none"> • Year which cash flows are expressed • Discount and inflation rates (in percent) • Life expectancy of the options considered (in years) • Exchange rates • Identification of the least cost resource for a region | Yes | Preliminary information provided and discussed at the third IRRP engagement on solution options, with an opportunity to provide feedback; and final assumptions are published with the IRRP report |