

MAY 26, 2023

IESO DER Roadmap Update

Purpose and Overview

The purpose of this presentation is to provide an update on the IESO's recent Distributed Energy Resources (DER) activities as identified in the IESO's [DER Roadmap](#) (published in December 2021).

Recent key milestones on DER integration into wholesale markets include:

- DER Market Vision Project (MVP) foundational and enhanced wholesale market participation models have been published
- A number of OEB/IESO Joint Targeted Call projects focused on DER integration are underway

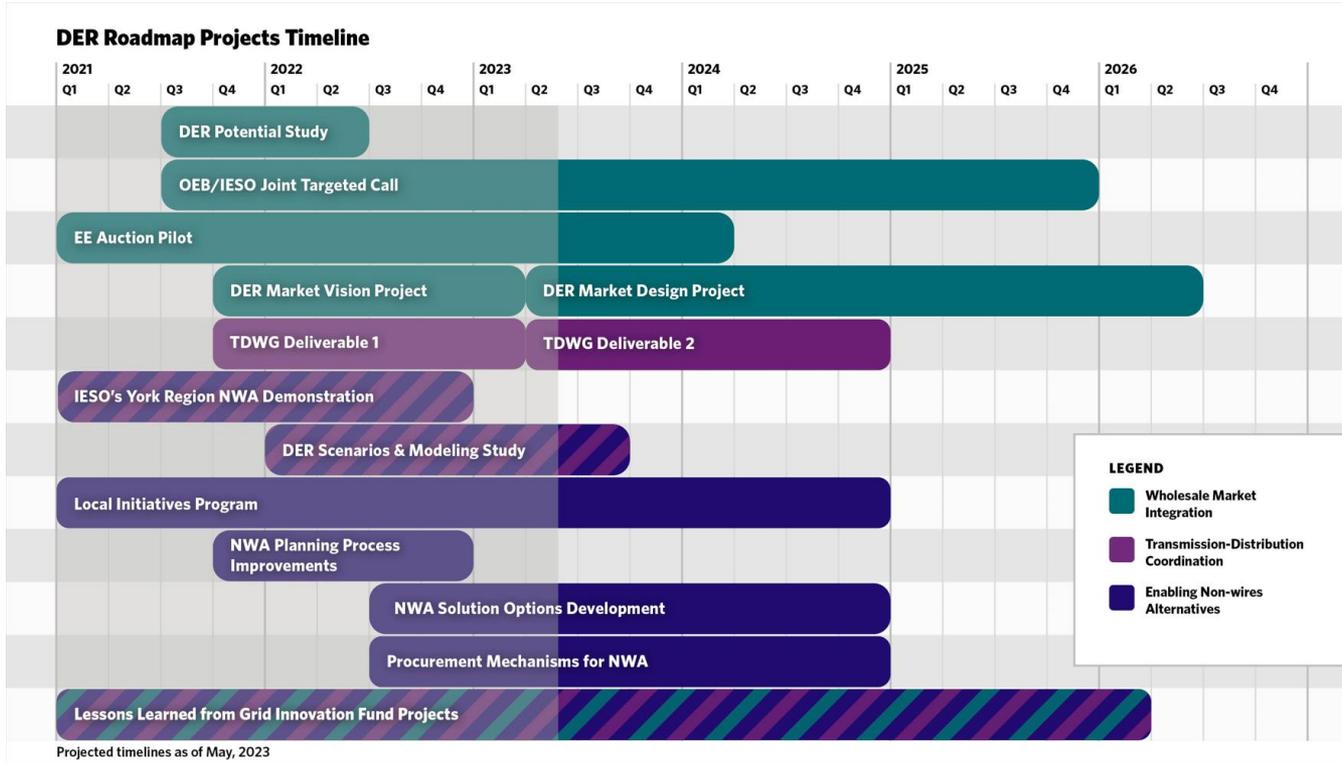
Agenda

IESO will provide updates on its recent activities across the following DER projects identified in the DER Roadmap*:

1. DER Market Vision Project (MVP) and Market Design Project (MDP)
2. Regional Planning Process Review (RPPR) Non-Wires Alternatives (NWA) action items
3. Transmission-Distribution Coordination Working Group (TDWG)
4. Conservation & Demand Management (CDM) Local Initiatives Program (LIP)

* Please note that as part of this IESO DER Roadmap update the Energy Efficiency Auction Pilot is not included as there are no material updates at this time.

The IESO's DER Roadmap



Quick Recap

- IESO's goal for DER integration is to maximize the value DERs can provide to Ontario's electricity system by addressing challenges and opportunities within the IESO's mandate
- DER Roadmap identifies three key focus areas for DER integration activities:
 1. Wholesale Market Integration
 2. Transmission-Distribution (T-D) Coordination
 3. Enabling Non-Wires Alternatives (NWAs)

DER MVP and MDP - Overview

- The objective of the Market Vision and Design Project is to introduce wholesale participation models that enhance DERs' ability to compete to provide the services they are technically capable of providing
- The project is separated into two key phases:
 1. DER Market Vision Project (MVP): explore new, “foundational” participation models for DER integration (including individual DERs <1MW in size) into wholesale markets and identify the criteria for more sophisticated models to form the basis of future DER integration efforts
 2. DER Market Design Project (MDP): in the second phase of the project, design and implement the foundational participation models from the MVP

DER MVP and MDP – Progress and Next Steps

- In late 2021, IESO identified [key areas of focus](#) and questions for the MVP
- In January 2022, a more [detailed plan](#) for MVP timelines/deliverables was presented alongside a jurisdictional scan of US integration efforts
- In June 2022, the IESO presented the [options under consideration](#) for the foundational and enhanced participation model(s)
- Recommendations for the foundational model(s) were [presented](#) in September 2022 along with associated rationale for the recommendation
- Similarly, recommendations for the enhanced model were [presented](#) in January 2023, alongside associated rationale; IESO expects to provide responses to stakeholder feedback and an updated MDP work plan by end of Q2/early Q3

RPPR Non-Wires Alternative (NWA) - Action Items

- As part of the [Regional Planning Process Review](#) (RPPR) action items, a number of work streams are underway:
 1. NWA Regional Planning Process Improvements: this work stream will refine the approach to identifying opportunities for cost-effective DER and energy efficiency to defer the need for traditional transmission solutions
 2. NWA Solution Options Development: this work stream will develop NWA options in sufficient detail to assess their economic viability and operationalize Integrated Regional Resource Plan (IRRP) recommendations.

RPPR NWA - Action Items (continued)

3. Procurement Mechanisms for NWAs: this work stream will consider how to procure resources as part of implementing NWA solutions (e.g., via Capacity Auction, Medium-Term/Long-Term RFPs or define new approaches), where cost effective

The IESO is advancing the RPPR NWA action items towards the milestones noted in the DER Roadmap

- In October 2021, IESO published an [update](#) on NWA Planning Process Improvements
- In August 2022, a webinar [update](#) provided further detail on the proposed process improvements, next steps for the enabling NWAs projects, and sought feedback on the hourly demand profiling methodology and non-wires options analysis in IRRPs

RPPR NWA - Action Items (continued)

- Work stream 1 (process improvements) will culminate in the Integrated Regional Resource Plan: Guide to Assessing Non-wires Alternatives document to be published shortly in Q2 2023
 - The guide will be updated from time to time to reflect new technologies, regulations, and procurement mechanisms
- The guide also provides additional clarity on NWA options development but further work will be required for work stream 2 and 3 (options development and procurement mechanism)
 - The scope of this work depends on regulatory developments in initiatives such as the OEB Framework for Energy Innovation's (FEI) Benefit Cost Analysis (BCA) Framework Phase 2 which will extend beyond 2023/24

T-D Coordination Working Group (TDWG)

- The TDWG's year 1 objective was to support the IESO in proposing conceptual T-D coordination processes among the IESO, LDCs, and DER providers to inform T-D coordination issues in the DER Market Vision Project by Q1 of 2023
- Meetings took place throughout 2022, and draft conceptual coordination protocols for the [Dual Participation](#) and [Total DSO](#) models have been published (notes and materials available on the [TDWG](#) webpage)
- The DER Scenarios & Modelling Study to support the development of conceptual coordination protocols is underway, expected by Q3, 2023
- Deliverables, Terms of Reference refresh and work plan for continued scope until 2024 will be discussed at the next meeting

CDM Local Initiatives Program (LIP)

- The Local Initiatives Program aims to demonstrate the use of targeted Conservation and Demand Management (CDM) as a cost-effective resource to help address identified local and/or regional needs
- The program also seeks to demonstrate a targeted procurement strategy and will help inform how to plan for and procure CDM to meet identified NWA needs
- Richview South area in Toronto: business program is now in market (BizEnergySaver); residential program will launch in May (CoolSaver, an air conditioner optimization program)

CDM Local Initiatives Program (LIP)

- A multi-regional RFP to cover the three remaining target areas for the first half of the CDM framework - Belle River (Windsor-Essex), Ottawa and York Region - closed and is under evaluation; working with Hydro One and Hydro Ottawa to collaborate on selection and delivery of initiatives (Alectra chose not to participate)
- Oct. 4 directive provided additional funding and mechanisms to add flexibility and reduce participation barriers; enhanced Retrofit incentives for non-lighting measures launched for a period of six months in Niagara Region, Southern Huron Perth, Kingston area, Pembroke area and Kenora

Next Steps

- We look forward to our continued engagement with stakeholders on the DER Roadmap's activities
- Links to all projects and initiatives are available on the DER Roadmap engagement page:
 - <https://www.ieso.ca/en/Sector-Participants/Engagement-Initiatives/Engagements/Distributed-Energy-Resources-Roadmap>

Thank You

ieso.ca

1.888.448.7777

customer.relations@ieso.ca

engagement@ieso.ca



[@IESO Tweets](https://twitter.com/IESO)



[linkedin.com/company/IESO](https://www.linkedin.com/company/IESO)