

**APRIL 20, 2022**

# Hydroelectric Program Development & Assessment IESO Stakeholder Engagement Days

# Purpose

The purpose of this engagement is to:

- Summarize the scope of the IESO work as it relates to the development of a small hydro program and a large hydro assessment
- Present high-level design concepts for the Small Hydro Program
- Review highlights of discussions held with the hydroelectric community on the Small Hydro Program
- Discuss next steps



# Background

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- In a directive dated January 28, 2022, the Minister instructed the IESO to:
  - Design a Small Hydro Program
  - Conduct an assessment of a program for Large Hydro
- Key stakeholders are to be consulted

# Background: Small Hydro Program

<b>SCOPE</b>	<ul style="list-style-type: none"><li>• Existing facilities</li><li>• Installed capacities of 10MW and below</li><li>• Contracts with the IESO or OEFC expiring on or before December 31, 2030 (or have already expired)</li><li>• Provide value for ratepayers and a reasonable revenue stream such that facilities can continue operating</li></ul>
<b>DELIVERABLE</b>	<p>By July 1, 2022, the IESO shall provide a report to the Ministry of Energy that contains:</p> <ul style="list-style-type: none"><li>• Final design, including term and price</li><li>• Timeline for re-contracting small hydroelectric facilities</li><li>• Summary of feedback received during consultation and steps taken to address the feedback</li></ul>
<b>ELIGIBLE</b>	<ul style="list-style-type: none"><li>• Approximately 30 companies, representing around 50 facilities</li></ul>

# Background: Large Hydro Program Assessment

<b>SCOPE</b>	<ul style="list-style-type: none"><li>• Existing facilities</li><li>• Installed capacities greater than 10MW</li><li>• Contracts with the IESO or OEFC expiring on or before December 31, 2030 (or have already expired)</li><li>• Analysis to consider the rate payer value in contracting approaches (program, bilateral or competitive), social value provided and capital investments required</li></ul>
<b>DELIVERABLE</b>	<p>By October 1, 2022, the IESO shall provide a report to the Ministry of Energy containing its assessment.</p>
<b>ELIGIBLE</b>	<ul style="list-style-type: none"><li>• 3 companies, representing 22 facilities and just under 1000MW</li><li>• Mostly located in the northwest</li></ul>



# Program Design

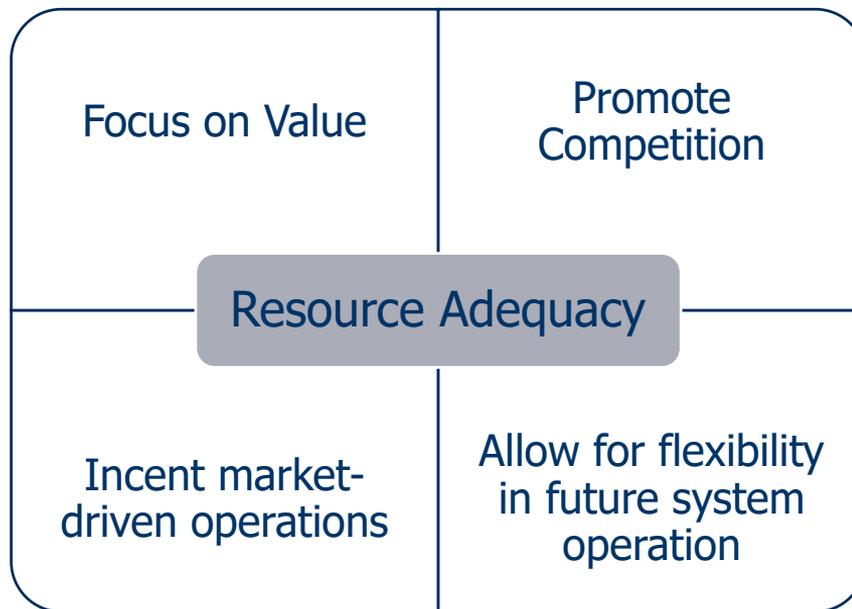
# Program Design



# Design Foundation: Resource Adequacy Framework

The IESO has evolved its approach to meeting system needs through the development of the Resource Adequacy Framework

- The Small Hydro program design will be based on the foundational principles of the Resource Adequacy Framework



# Design Foundation: Resource Adequacy Framework (2)

<b>Mechanism</b>	<b>Application</b>
Capacity Auction	To balance fluctuations in capacity needs from one year to the next
Medium-Term Commitments	To secure resources that require either longer forward periods or multi-year commitments, resources can participate in either competitive procurements, such as an RFP, or potentially an enhanced capacity auction in the future
Long-Term Commitment	To secure resources with very long forward periods or commitments, such as new-build facilities
Programs	To meet electricity and policy objectives in a more targeted manner as directed As per the directive, a program is “a mechanism to sustain investments in assets, resources and businesses that can help meet electricity and non-electricity objectives”
Bilateral Negotiations	To secure resources where a need exists that cannot be addressed in a practical and timely way through competitive processes. This is likely to occur when needs are urgent and/or must be satisfied by supply in a specific location in the province

## Design Goal

- Focus on highlighting and enhancing, where possible, the system value that hydroelectric resources bring to the electricity system
- Incent resources to align and evolve their operations, where possible, to be responsive to the Ontario electricity system needs and markets as they evolve
- Maintain optionality so that in the future, some small hydro resources might be able to, and will have the option, to transition to other procurement mechanisms
- Additionally, as per the directive, the program is to “be designed to provide value for ratepayers while providing a reasonable revenue stream for facilities to continue operating”

# Design Concepts

- Capacity Payments
- Dispatchability
- Investment
- Tranching
- Contract Length

# Design Concept Summary

## Payments

- Payment based on services provided (capacity) and incentives to participate in the energy and ancillary services market, as applicable
- Overall payment to provide reasonably sufficient revenues for continued operation

## Dispatchability

- Incorporate value in dispatchability through additional payment, where possible
- IESO recognizes technical, regulatory and environmental limitations to responsiveness

## Investment

- Beyond annual maintenance, could incorporate support for more extensive investments
- Hybridization projects, upgrades involving indigenous ownership, projects to enable dispatchability, reinvestment milestones, etc.

## Design Concept Summary (2)

### Tranching

- Opportunity to avoid “one size fits all” contract structure
- Enable more appropriate valuation among range of characteristics within fleet
- Could depend on size, location, connection type, indigenous or community participation, investment requirements etc.

### Contract Length

- Contract length no longer than 10 years
- Facilities participate in program before expiry of existing contract
- Review in 2026 to update program based on impacts of the Market Renewal Program

# Discussions with Hydroelectric Community



- Direct outreach sessions with eligible Small Hydro facility owners held on March 26, 29 & 30
- Broader outreach session with eligible and non-eligible hydroelectric owners held on April 1
- Stakeholders were invited to complete a questionnaire and submit feedback by April 19<sup>th</sup>

# Discussions with Hydroelectric Community – Key Themes

## Certainty

- Financial security for capital planning & financing
- Contract provides greater assurance than a program
- Interest in combined forward period and contract period providing an adequate planning horizon

## Simplicity

- Preference to maintain status quo
- Straightforward contract and payment structure for ease of understanding and adoption
- Generalize typical investment requirements (avoid need to understand site by site requirements)

## Site Limitations

- Limited control over water flow due to operating objectives outside the electricity system



# Next Steps

## Next Steps: Small Hydro Program Design

- IESO to post feedback and responses, received from both this session and the hydroelectric community outreach sessions, in May
- IESO to host workshop(s) with eligible Small Hydro community in May to present and discuss refined design
- Report back to Ministry by July 1, 2022

## Next Steps: Large Hydro Assessment

- Direct meetings to be scheduled for June/July to initiate conversations
- Procurement of consultant to assist in assessment of social value is underway



# Questions & Discussion

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# Thank You

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