SEPTEMBER 28, 2020

Resource Adequacy Stakeholder Engagement

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Webinar Participation (including audio)

- Registration Link: use "Ask a Question" function to submit a question
- Teleconference participation (audio only):
  - Local (+1) 416 764 8640; Toll Free (+1) 888 239 2037
  - Press *1 to alert the operator that you have a question
  - When asking a question, state your name and who you represent
- This webinar is conducted in accordance with the IESO Engagement Principles

Agenda

- Introduction and Context
  - Leonard Kula – Vice President, Planning, Acquisition and Operations, and Chief Operating Officer
- Overview
- Draft Resource Adequacy Framework
- Stakeholder Engagement Plan
- Stakeholder Feedback and Next Steps

Introduction and Context

Context

- Ontario has a diverse supply mix with the majority of resources being rate-regulated or contracted; these resources provide the bulk of Ontario energy, capacity and ancillary services.
- Although every resource type has strengths and limitations, in aggregate Ontario's portfolio diversity significantly enhances reliability.
- As technology evolves and system needs change, it is important to enhance existing assets and attract new resources that ensure we can meet all of our system needs in a timely, flexible and cost-effective manner.
- IESO can build on lessons learned from past procurement practices and find ways to lower the total cost of the system by keeping acquisitions better aligned with evolving system needs.

Today’s Overview

Resource Adequacy Engagement Objectives

- Establish a framework to competitively acquire capacity to meet short, mid, and long-term electricity system needs in a way that:
  - Effectively balances cost and risk and;
  - Ensures full implementation in time to address larger capacity needs forecast to begin in 2028

Prior Stakeholder Engagement

- Extensive stakeholder engagement was conducted prior to the postponement of the Resource Adequacy engagement in January.
- Input from stakeholders received through engagement on the Incremental Capacity Auction (ICA) High-level Design presented consistent advice on competitively acquiring resources.
- The IESO has used this feedback to develop a draft framework that can be used as a starting point for discussion with stakeholders.

Prior Stakeholder Engagement – Key Feedback Themes

- Recognition that a "one-size-fits-all" approach won't be sufficient to balance supplier, ratepayer and system operator risks and cost-effectively meet all of our needs.
- Different resource types have different risks, requirements and timelines for development that should be considered.
- Different tools are better suited to different resource types.
- Some resources are not suited to competitive acquisition mechanisms.
- System planning forecasts will have to align with any resource adequacy strategy we go forward with.
- Increased risk in Ontario markets due to regulatory and political uncertainty.

Principles to Guide the Conversation

The principles that have guided Market Renewal are appropriate to consider as we examine our capacity needs:

- **Efficiency** - focus on efficient outcomes to reduce system costs
- **Competition** - provide open, fair, non-discriminatory competitive opportunities for participants to help meet evolving system needs
- **Implementability** - work together with our stakeholders to evolve the market in a feasible and practical manner
- **Certainty** - establish stable, enduring mechanisms that send clear, efficient price signals
- **Transparency** - accurate, timely and relevant information is available and accessible to participants to enable their effective participation to meet system needs

In addition, our established solutions must enable IESO to maintain reliability in a manner that is aligned with policy objectives.

Question for Stakeholders

Are there other principles that should be considered throughout this discussion?

Draft Framework

Objectives for the Framework

- As we develop a framework for competitively acquiring capacity, we will seek to ensure cost-effective reliability
- What does cost-effective reliability look like?
  - Acquisition decisions based on transparent planning processes/forecasting
  - Competition maximized, while recognizing timing requirements of different resource types (e.g., new vs. existing)
  - Flexibility maintained to allow for evolving system needs (quantity and type), technologies, and costs

Overall Considerations

- To maximize competition, and provide business planning certainty, resource adequacy needs should be planned and acquired for three distinct timeframes: short, mid and long-term
  - Flexibility in system planning must be maintained, in the event that system needs change
- Competitions should be tailored to the specific risks for various resource types (e.g., longer term commitments for resources with high capital costs, shorter terms for more flexible resources)

Overall Considerations (continued)

- Investment in large strategic assets may continue to be driven by Government Policy
  - Investment in nuclear and large-scale hydro resources are based on long-term strategic views that capture more than just the forecasted electricity needs

Overall Considerations (continued)

- Programs
  - Investments in assets, resources and businesses that can meet both electricity and non-electricity objectives (e.g., energy efficiency)
- Where investment in large strategic assets and programs contributes to meeting capacity needs we will coordinate that with our capacity procurements
- Processes will run in parallel and will require effective integration between these mechanisms to ensure we don't over-acquire/ under-acquire

Draft Set of Mechanisms

- Capacity auctions will be a part of this strategy and will remain as the IESO's primary mechanism for acquiring smaller amounts of capacity to meet fluctuating needs
  - Our use of capacity auctions for short-term needs helps manage the risk of over/under acquiring resources
- To meet relatively certain mid-term needs, capacity auctions or targeted RFPs are proposed to re-acquire existing resources of a minimum size that have material costs to re-invest and extend their capability

Draft Set of Mechanisms (continued)

- To meet needs that are within long-term forecast confidence, RFPs will likely be required to acquire newly-built resources or existing resources that require major upgrades, recognizing these resources have long development times

Proposed High-level Framework

Timeframe	Competitive Mechanism	Resource Types
Short-term	**Capacity Auction** • Seasonal commitment • Short lead time/forward period (e.g., < 12 months in advance) • Run auction annually on a fixed schedule • Auction acts as a balancing mechanism (e.g., target capacity adjusted to latest forecast) • Acquire unbundled capacity	• Demand Response, imports, certain existing generators and storage resources • Likely to reach a maximum % of our total capacity • New build that can meet the eligibility requirements and obligations
Mid-term	**Capacity Auction with enhancements**, or **RFP/Contract** with focus on existing resources • Multi-year commitment, with longer forward period (up to 3-4 years) • Run as needed based on Planning criteria triggers • Acquire unbundled capacity	• Existing resources that have material re-investment costs needed to extend their capability • New build that can meet the eligibility requirements and obligations forward period requirements

Proposed High-level Framework (continued)

Timeframe	Competitive Mechanism	Resource Types
Long-term	**RFP/Contract** for new resources • Longer term commitments and forward period aligned with financing needs and life of the facility • Run as needed based on Planning criteria triggers • Consider forecast confidence when setting target value • Consideration to acquire attributes beyond capacity	• New build or major upgrades to existing resources

Capacity Targets and Triggers

Mechanism/Target Setting	Considerations
Capacity Auction • Needs identified annually through IESO Outlooks • Require a methodology to translate outlook needs to target capacity	• Seasonal commitment • Need to consider how to ensure sufficient competition
Capacity Auction with enhancements, or **RFP/Contract** with focus on existing resources • Capacity needs identified in APO for period 3 years in the future. • Require a methodology to translate outlook needs to target capacity	• Need to have clear view of available MW in auction mechanism
RFP/Contract for new resources • Target capacity based on needs identified in APO for period 5+ years in the future.	• Need to have clear view of available MW in auction mechanism, as well as mid-term mechanism

Questions for Stakeholders

- Based on the framework described:
  - Do these three capacity acquisition timeframes (commitment and forward periods) provide sufficient options for meeting the needs of your resource type?
  - Which option(s) are most suited to your resource type?
  - Based on timing when various mechanisms are going to be available, do you see timing gaps when a resource needs a mechanism before that mechanism is ready?

Managing Uncertainty

- Over the last few years, we have seen an increase in uncertainty that impacts both the demand and the supply side
  - The changes are driven by a number of factors, including but not limited to broad economic changes (e.g., 2008 recession, COVID-19, growth in the agricultural sector in SW Ontario), technological enhancements and policy objectives

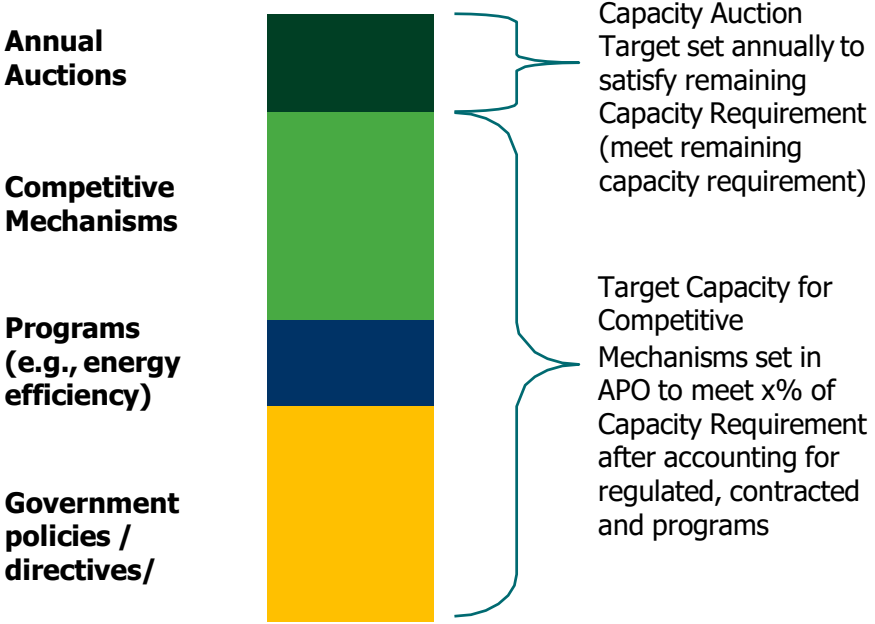
Managing Uncertainty (continued)

- Our forecasting will therefore not be perfect. In order to avoid over or under-buying for our system needs, we need to factor forecast uncertainty into our acquisition mechanisms
  - For example, needs that emerge in the 10+ years horizon will be less accurate than those 1 year out
  - We will consider forecast certainty to determine how much to procure through long-term commitments

Managing Uncertainty (continued)

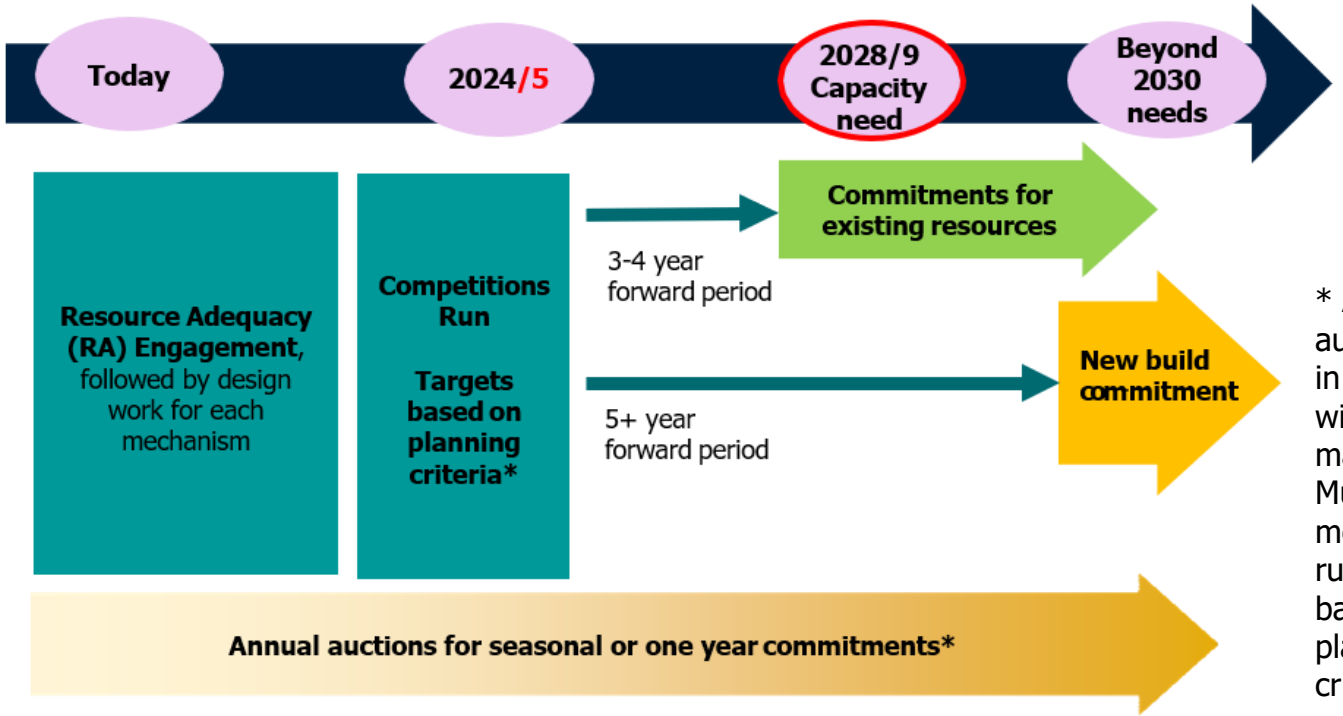
- As such, when incenting investment in the long-term, the IESO is likely not willing to buy 100 per cent of the forecasted need, but rather only a percentage of it.
  - This approach allows for flexibility in meeting system needs, as it could allow new technology to come in and provide those system needs more cost-effectively. Maintaining this flexibility will ensure we are prudent in our decision-making process.

Illustrative Target Capacity to Integrate Capacity Acquisition Processes



- Target Capacity processes to be transparent
- Target Capacity for competitive processes will need to reflect the forecast uncertainty as the process will be forecasting need several years out

Timeline to 2028



* Annual auctions to run in accordance with the market rules. Multi-year mechanisms to run as needed based on planning criteria.

Enabling Resources in the Short-Term

- The Capacity Auction will continue to play an important role as part of this framework
  - Meet fluctuating system needs through less capital cost-intensive resources
  - Provides certainty through a commitment to run an annual auction
  - Shorter forward period provides flexibility to meet system needs based on latest forecasts

Enabling Resources in the Short-Term (continued)

- The current Capacity Auction is in place and is designed to facilitate participation from:
  - Demand Response
  - System backed Imports
  - Existing storage and off-contract generators
- Capacity needs in the near-term can be met by the auction with a focus to enhance the auction and increase participation from other resources that are currently not or only partially enabled

Stakeholder Engagement Plan

Engagement Plan - Timeline

- **September**:
  - Provide overview of proposed framework and principles to guide implementation
- **November**:
  - Identify work streams for subsequent engagements
- **December:**
  - Recommendation to IESO Board
- **Q1 2021:**
  - Present final high-level framework to stakeholders, outline plans for subsequent engagements to develop details needed to operationalize and implement the mechanisms, and develop the transition plan

Implementation

- As we operationalize the proposed framework, there are a number of areas that we will continue to engage on:
  - Target capacity setting for the different mechanisms
  - Capacity auction evolution
  - Role of Reliability Must Run contracts
  - Interaction between different planning processes

Question for Stakeholders

- What else needs to be considered in discussions on the high-level framework?
- What needs to be considered in future engagement phases to develop the details of the mechanisms in the framework?
- What other areas need to be discussed with stakeholders to operationalize the framework?

Stakeholder Feedback and Next Steps

Recap of Questions for Stakeholder Feedback

- Are there other principles that should be considered (refer to slide 12)?
- Based on the framework described (refer to slide 22):
  - Do these three capacity acquisition timeframes (commitment and forward periods) provide sufficient options for meeting the needs of your resource type?
  - Which option(s) are most suited to your resource type?
  - Based on timing when various mechanisms are going to be available, do you see timing gaps when a resource needs a mechanism before that mechanism is ready?

Recap of Question for Stakeholder Feedback (continued)

- Engagement Plan (Refer to slide 33):
  - What needs to be considered in future engagement phases to develop the details of the mechanisms in the framework?
  - What other areas need to be discussed with stakeholders to operationalize the framework
  - What other areas need to be discussed with stakeholders to operationalize the framework?

Submitting Stakeholder Feedback

- Please provide any written feedback to engagement@ieso.ca by October 20 using the feedback form on the engagement webpage
- IESO will review stakeholder feedback and provide a response at a future engagement session

Thank You

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