

MARCH 22, 2021

Resource Adequacy Engagement

Webinar Participation (including audio)

- To interact, click the “Show Conversation” icon (message bubble symbol) to submit a written question or click on the “Raise hand” icon (hand symbol) at the top of the application window to indicate to the host you would like to speak
- Audio should be muted at all times. To unmute audio, click on the microphone icon at the top of the application window
- This webinar is conducted according to the [IESO Engagement Principles](#)

Webinar Participation (Connection Issues)

If you experience issues logging in:

- Disconnect from remote server connections (VPN) and try logging in again
- Download the mobile app and join through mobile
- Need help? Contact [Microsoft Office Support](#)

Agenda

- Stakeholder feedback following January 26, 2021 webinar
- Resource Adequacy Framework General Update
- Overview of upcoming Resource Adequacy engagement
- Enhancing the Capacity Auction
 - Stakeholder feedback and IESO response
 - Auction goals and enhancement plan
 - Stakeholder engagement in 2021
- Next Steps

Discussion of Forecasting Uncertainties

- A critical consideration for determining when to operationalize the longer term component of the Resource Adequacy framework is the uncertainties associated with forecasted Resource Adequacy needs
- A discussion of these uncertainties will begin following the Next Steps section of this presentation



Stakeholder Feedback Following Jan. 26, 2021 Webinar

Stakeholder Feedback

- Stakeholder feedback was requested on the proposed process to translate planning needs into acquisition targets and selection of competitive mechanisms through development of an Annual Acquisition Report (AAR)
- 14 written stakeholder feedback submissions were received
- The IESO has posted a document on the Resource Adequacy engagement webpage that summarizes this stakeholder feedback and provides a corresponding IESO response
- The following slides will address some important feedback themes

Transparency, Governance and Decision-Making

Stakeholder Feedback

- Similar to previous Resource Adequacy stakeholder feedback, stakeholders raised concerns about lack of transparency and competition in the unsolicited proposals process and other non-competitive procurements and that more detail beyond the Feb. 2021 Stakeholder Advisory Committee presentation on unsolicited proposals process is needed.

Transparency, Governance and Decision-Making (cont'd)

IESO Response

- The Annual Acquisition Report (AAR) IESO outlined in the January engagement discussion will provide stakeholders with a summary of forecasted system needs and a clear statement of how the IESO will meet those needs. As noted previously, the AAR will also identify acquisitions that are driven by government directives or policies.
- Regarding non-competitive procurements, including any assessment of unsolicited project proposals provided to government, the IESO will share further details on the methodology it uses for analysis of any project proposals. Any other information is confidential to proponents and cannot be shared.

Annual Acquisition Report

Stakeholder Feedback

- Stakeholders indicated general support for the proposed process to translate planning needs into acquisition targets and selection of competitive mechanisms through development of an AAR
- Stakeholders agreed that the AAR should be developed and released after the Annual Planning Outlook (APO)
- Stakeholders had various requests for additional information on scope, timing, and content, including whether stakeholders will have an opportunity to comment on details such as targets, mechanisms, etc.

Annual Acquisition Report

IESO Response

- The IESO is pleased that stakeholders generally support the development of this report and the timing of its release. The IESO is committed to producing an AAR and looks forward to sharing it with stakeholders for their review and comment.

Engagement Plan and Timeline

Stakeholder Feedback

- Stakeholders asked the IESO to provide a set schedule of Resource Adequacy Engagement meeting dates for remainder of 2021
- Stakeholders provided various suggestions for important Resource Adequacy topics that need to be discussed
- Timeframe of full implementation of Resource Adequacy framework by the end of the decade is too late. Framework should be fully defined in 2021 and implemented in 2022.

Engagement Plan and Timeline (continued)

IESO Response

- As part of this presentation, the IESO will provide a summary of the expected topics of discussion for upcoming meetings. An updated Resource Adequacy engagement plan is under development and will be shared with stakeholders at a future meeting in 2021 as well.
- Full implementation of the Resource Adequacy framework in this context was intended to mean that all elements are in place and have been executed as needed. The end of the decade is expected to be a reasonable timeframe for this.



Resource Adequacy Framework General Update

Resource Adequacy Framework – Capacity Auction

- The Resource Adequacy framework recognizes the Capacity Auction as the main acquisition mechanism to meet short-term system needs
- The auction will evolve to focus on meeting the short-term needs and work together effectively with a mid-term RFP and future long-term mechanism to meet the needs emerging mid to late this decade
- The evolution of the auction will be closely tied to growing interest and participation in the auction, and addressing identified resource performance issues

Context – Flexibly Acquiring Cost-Effective Capacity

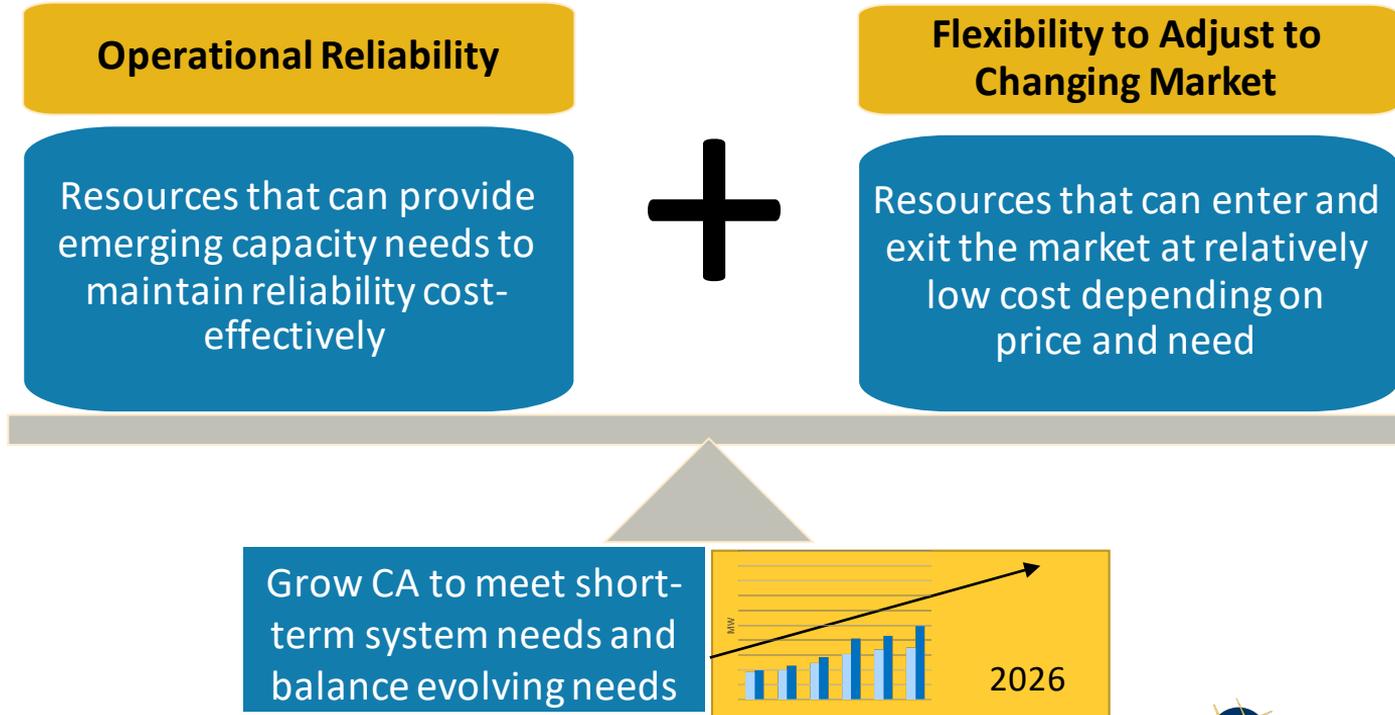
- Auction to provide flexibility by acting as a balancing mechanism to mitigate uncertainty associated with over/under supply
 - “Flexibility” here refers to the ability to respond to variation in supply/needs
 - Helps reduce the reliability risk due to under procurement and the higher cost risk due to over procurement
- Important to attract a balanced mix of resources to increase flexibility in managing changing needs in the near-term and enhance competition

Growth of the Auction

- Need to grow the capacity auction to help meet emerging system needs and act as an annual balancing mechanism as needs evolve
- IESO expects that the planned enhancements will enable the capacity auction to acquire more than double the capacity currently acquired
- Consistent capacity definition in UCAP* across acquisition mechanisms is important and a priority item to work with stakeholders on

*UCAP refers to unforced capacity, or the actual amount of delivered effective capacity during peak hours

Auction to Attract a Balanced Mix of Resources



Acquisition Mechanisms Need to Work Together

- The AAR will outline how the IESO will deploy the various acquisition mechanisms to meet emerging needs:
 - Capacity Auction – short-term capacity product
 - Mid-term RFP – provide competitive opportunity for resources coming off contract
 - Long-term RFP – provide appropriate incentives to drive new resource development
 - Bilateral contracting – where and when competitions cannot be used, the IESO will bilaterally contract to maintain reliability

Path towards AAR Issuance

- In order to be able to issue an AAR by mid-year, the IESO will engage with stakeholders on:
 - Clarifying how the mechanisms interact and work together, including the type of products being procured and the decision-making process for which mechanism to use
 - Target capacity-setting process for the different mechanisms
 - Eligibility requirements for participation and supplier obligations

Resource Adequacy – Longer term needs

- The goal of the long-term mechanism is to provide appropriate incentives to attract investment in new resources when needed
- While early notice will be important to provide the sector time to plan, this must be balanced against the various uncertainties in the forecast that will firm up over time

Upcoming Engagement

- There is a lot of work that needs to be done, both in the short term over the next few months, as well as throughout the remainder of 2021 and beyond
- A challenge will be to efficiently engage now, in order to support preparation of the first AAR in the near term, while recognizing that some topics will require more extensive and ongoing discussions to inform subsequent AARs going forward
- Stakeholders and IESO recognize the need to establish an engagement plan to help guide productive discussions as the year progresses

Upcoming Engagement - April

- Resource Adequacy – interplay of short, medium, and long-term timeframes and mechanisms
- Mid-term needs compared to shorter term needs
 - What is expected of resources with a mid-term commitment?
- Mid-term mechanism
 - How an RFP can effectively address mid-term needs
- Ensuring ratepayer value through competition

Upcoming Engagement – May to December

- May
 - General requirements, specifications and eligibility for the mid-term mechanism
 - UCAP considerations
- June - December
 - Engagement plan covering the remainder of the year
 - Topics informed by work-to-date and most pressing needs
 - 2021 AAR timing



Enhancing the Capacity Auction

Discussion Items

- Stakeholder feedback and IESO response
- Auction goals and enhancement plan
- Stakeholder engagement in 2021



Stakeholder Feedback

In response to January 26, 2021 Resource Adequacy
Webinar

Stakeholder Feedback

- During the January 26, 2021 Resource Adequacy webinar, stakeholders were asked to provide feedback on:
 - **Are there concerns with the proposed Capacity Auction enhancements?**
- The IESO received written feedback from 14 stakeholders
- After reviewing all feedback submissions, some common themes emerged in relation to the auction enhancements, which will be identified in the following slides

Key Theme - Transition to UCAP

Stakeholder Feedback

- Stakeholders were generally supportive of transitioning to UCAP and advised a close collaboration between the IESO and stakeholders to develop technology specific UCAP methodologies
- Some initial recommendations include:
 - Using an Effective Load Carrying Capability (ELCC) study to define UCAP for variable generators
 - Determining capacity values on a seasonal, not annual basis, consistent with summer and winter capacity targets

Key Theme - Transition to UCAP (continued)

IESO Response

- The IESO is pleased to see stakeholders recognize the importance of transitioning to UCAP
- Over the course of the Spring, the IESO will begin consulting with stakeholders on a proposed approach to establishing a qualified capacity process to transition to UCAP-based acquisition
- This includes resource-specific qualified capacity methodologies

Key Theme - Capacity Auction Enhancements

Stakeholder Feedback

- Various stakeholders indicated general support for the capacity auction enhancements proposed. Some suggestions include:
 - Establishing a minimum capacity floor for upcoming years to help stakeholders plan for participation in the auction
 - Introducing a minimum clearing price
- One stakeholder commented that the existing capacity auction is insufficient to maintain existing generating capacity, particularly gas-fired generators

Key Theme - Capacity Auction Enhancements (cont'd)

IESO Response

- The Capacity Auction has been developed to be the IESO's primary mechanism to acquire short-term needs (up to 2026) and to balance longer term emerging needs
 - The interaction between the annual auction and other mid/long term mechanisms will be discussed in upcoming meetings
- The IESO is committing to annual auctions and plans to introduce enhancements to increase stability and certainty – including a minimum capacity floor and a target capacity trajectory through to 2026

Key Theme – Expanding Participation

Stakeholder Feedback

- The definition of uprates should be provided. Specifically, can the addition of storage be considered in this definition?
- Stakeholders requested IESO provide a plan/timeline for when DERs are anticipated to be eligible to participate in Capacity Auctions

Key Theme – Expanding Participation (continued)

IESO Response

- IESO will consult with stakeholders on expanding participation in the auction to include uprates; this will include definitions, eligibility and related aspects for an integrated design
- The market participation framework for DERs needs to first be determined before discussions on DERs eligibility in the auction can take place
- The IESO will begin to engage with stakeholders on its DER Roadmap in Q2 to identify IESO objectives, initiatives, and timelines for DER integration.



Capacity Auction Enhancements

Auction Goal

Goal

Acquire cost effective capacity and act as an enduring balancing mechanism as needs evolve

How

Growing the Market

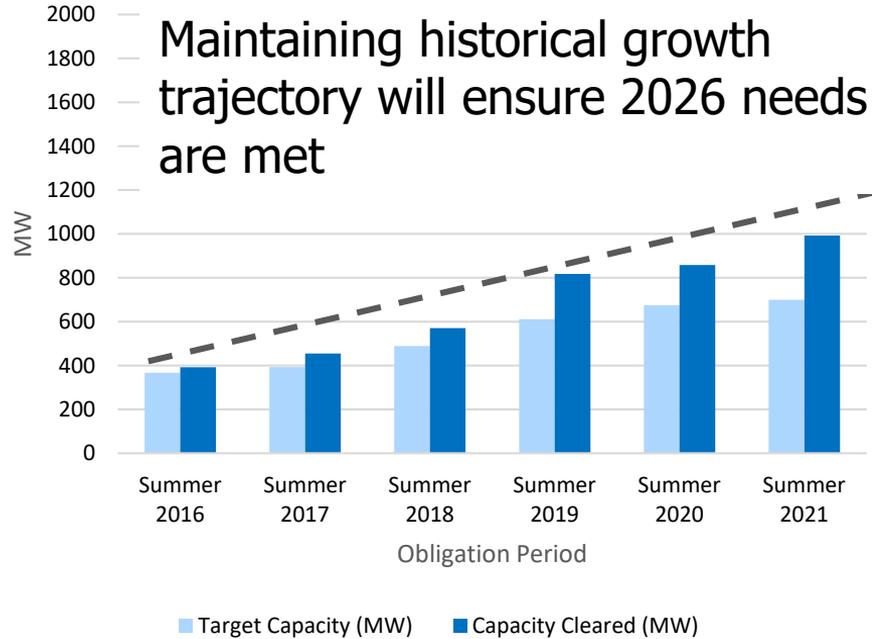
Increase participation in the auction from diversity of resource types and improving certainty

+

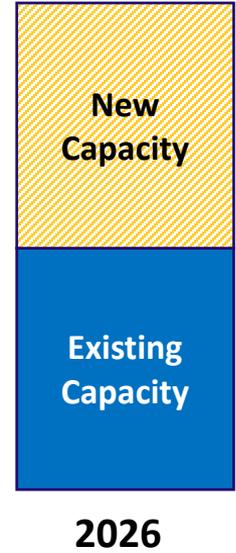
Improving Performance

Enhance the reliability and market performance of acquired capacity resources

Growing the Market



Need to attract diversity of resource types to provide desired flexibility for the auction to act as a balancing mechanism



Growing the Market – Key Activities

Ensure the auction can flexibly acquire cost effective capacity to meet system needs

Expand Participation

- Together with stakeholders, IESO will gradually explore expanding participation by enabling additional resource types such as resource-backed imports and uprates from existing resources

Increase Certainty

- Establish a minimum capacity floor and a target capacity trajectory to ensure the auction delivers stability and certainty to continue to attract new participants

Improving Resource Performance – Transition to UCAP

- The current auction procures capacity on an installed basis and relies on clawbacks and charges to address performance issues after the fact
- Best practice is to use a Qualified Capacity process to procure capacity on an effective basis; i.e., UCAP (Unforced Capacity)

Assesses the ability of a resource to actually provide capacity when needed, i.e., its effective contribution towards meeting system needs

Creates a level playing field amongst different resource types while considering their unique characteristics

Ensures the IESO only pays upfront for the expected performance of the resource rather than only relying on after the fact penalty

Improve Market Performance

- Steps to improve market performance of acquired resources is essential
 - Reduces the risk of low performance from acquired resources when delivering upon their capacity during hours of system need
 - Improves confidence in and addresses concerns related to the value provided by resources secured in the auction
- The IESO will need to understand participants' operational challenges and other issues that may contribute to lower performance

Some discussions may be general, others may be resource-specific but will continue under the Capacity Auction stream of the Resource Adequacy engagement

Improving Resource Performance – Key Activities

Enhancing the reliability and market performance of capacity resources

Transition to UCAP (Effective Capacity)

- Establish Qualified Capacity process to better reflect the performance capability of each resource type
- Ensure alignment between planning assessment and the auction in terms of UCAP calculations
- Explore the impact of poor performance on future UCAP values

Improve Market Performance

- Eliminate payments for over-delivery of capacity
- Re-assess current charges and plan to update to incent better performance
- Introduce stronger future consequences for continued poor performance, including de-rates and removal from future auctions



Capacity Auction Stakeholder Engagement in 2021

Engagement Planning – Overview

- Early, regular engagement with stakeholders to set clear expectations, establish goals and solicit input
- Engagement to be closely coordinated with broader Resource Adequacy framework developments
- Continue relevant discussions from the Demand Response Working Group (DRWG), in terms of performance of Hourly DR resources (e.g., reviewing baseline methodology)

General Approach to Enhancing the Auction in 2021

2021

Design and stakeholder proposed enhancements and ongoing auction administrative improvements

- Assess current auction design and address areas of inefficiency and/or risk
- Recap of any relevant work previously stakeholdered in other auction related engagements
- Identify participation challenges and work with stakeholders to address them
- Improving resource performance will give confidence in continuing to grow and rely on the auction to meet future needs

Implementation of design enhancements will take place in 2022

Engagement Goals for 2021

Transition to UCAP

- Develop agreed upon capacity qualification methodologies to facilitate transition to UCAP for enabled resources in the 2022 auction and other mechanisms

Improve resource performance

- Clearly identify design enhancements to improve performance of acquired capacity resources
- Complete the baseline methodology analysis for Hourly DR resources, and discuss next steps if warranted

Expand participation

- Produce a roadmap for expanding participation by enabling additional resource types, with particular focus on resource-backed imports and uprates from existing resources

Upcoming Engagement Topics

April

- Discuss auction processes and administrative enhancements planned for the 2021 auction (based on the February webinar and the associated stakeholder feedback)
- Present draft scope for Hourly DR baseline methodology review

May

- Start QC and performance improvement discussions focusing on design goals, principles and expectations
- Recap from previous engagements
- Review current auction processes, obligations and charges, including resource testing procedures
- Better understand contributing factors affecting performance

Future Engagement Topics in 2021

- Proposed changes to Market Rules related to the 2021 auction
- Increasing MW from already enabled resource types (e.g., higher global imports limit to increase system-backed imports)
- Start discussion on enabling resource-backed imports and uprates from existing resources in future auctions
- Design Proposals related to performance obligations and assessment
- Discuss capacity qualification methodologies for different resource types



Stakeholder Feedback and Next Steps

Submitting Stakeholder Feedback

- Written feedback can be provided to engagement@ieso.ca using the feedback form on the [engagement web page](#) by April 14.
- Please use the feedback form provided to ensure stakeholder feedback is compliant with the Accessibility for Ontarians with Disabilities Act (AODA). If you choose not use the IESO feedback form, please provide an AODA compliant pdf document.

Next Steps

- **April Resource Adequacy Webinar Draft Agenda**
 - Interplay of short, medium, and long-term timeframes and mechanisms
 - Mid-term needs compared to shorter term needs - What is expected of resources with a medium-term commitment?
 - Mid-term mechanism - How an RFP can effectively address mid-term needs
 - Ensuring ratepayer value through competition

Next Steps (Continued)

- **April Resource Adequacy Webinar Draft Agenda (continued)**
 - Discuss auction processes and administrative enhancements planned for the 2021 auction (based on the February webinar and the associated stakeholder feedback)
 - Present draft scope for Hourly DR baseline methodology review

Thank You

ieso.ca

1.888.448.7777

customer.relations@ieso.ca

engagement@ieso.ca



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



facebook.com/OntarioIESO



linkedin.com/company/IESO