AUGUST 26, 2021

Medium Term RFP Engagement Kick-Off

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Agenda

- Medium Term RFP Overview
- Medium Term RFP Design Considerations
  - Procuring Capacity
  - Contractual Considerations
  - Resource Eligibility
  - Proposal Evaluation
  - Contract Expiry and Bridging
- Qualifying Capacity in the Medium Term RFP
- Next Steps and Stakeholder Feedback

Medium Term RFP Overview

Overview

- The Annual Acquisition Report (AAR) released on July 19, 2021, outlined that the IESO is seeking to initiate the first in a series of cadenced medium-term (MT) RFPs in 2021, targeted at re-committing existing resources
- The IESO will be procuring **up to 750 MW** of Qualified Capacity (QC) on a UCAP* basis, through the first MT RFP to **meet system needs** for a three-year commitment starting in 2026
- The IESO expects to issue draft procurement documents (Draft RFP, Draft Contract) in the Fall of 2021, for stakeholder feedback, with a goal to post final documents in Q1, 2022 and receive proposals in Q2-2022

*UCAP: Unforced Capacity

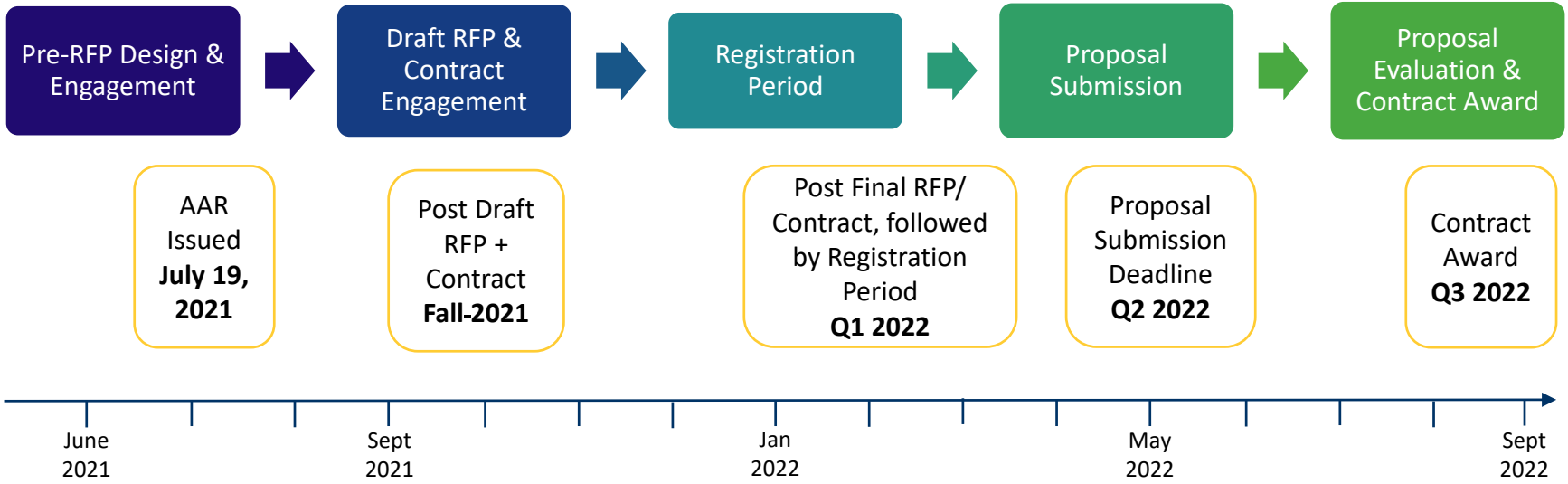
Focus on System Needs

- As the first in a line of medium-term and long-term acquisition mechanisms, the MT RFP represents IESO's transition to a **product/service** based acquisition framework that is centered on meeting power system reliability needs, as further outlined in the Resource Adequacy framework and the Annual Acquisition Report (AAR)
- As outlined in the AAR, the need in the second half of the decade is centered around capacity, and providing a competitive and transparent mechanism for existing resources coming off contract is an integral step in meeting our system needs

Balancing Flexibility and Certainty

- The shorter commitment period of the MT RFP provides the flexibility to re-calibrate the resources and services acquired to the ever-changing system needs
- At the same time, the commitment to a cadenced approach to subsequent procurements, together with the Capacity Auction, provides the certainty that the market has been seeking
- This first MT RFP will be transitional in nature to accommodate the diverse characteristics, services and participation models of current resources. The IESO invites stakeholder feedback to continue to shape the acquisition of services to satisfy identified needs

Proposed MT RFP Timeline



Medium Term RFP Design Considerations

The MT RFP is currently under development by the IESO and this presentation includes the IESO's current design considerations

Procuring Capacity

- The MT RFP has been identified as a mechanism to secure additional **capacity** for the **May 1, 2026** to **April 30, 2029** commitment period to meet system reliability needs
- In alignment with the IESO's Resource Adequacy framework and the AAR, the MT RFP will procure Qualified Capacity in UCAP to ensure resources are able to deliver on their capacity obligation when called upon

Further Explanation on UCAP is provided later in this presentation

Contractual Considerations

- It is proposed that the MT RFP will be a capacity style contract that pays proponents based on their Qualified Capacity only
- It is proposed that additional revenue opportunities will be left with the supplier. This could include energy market revenues and any monetization of other products/attributes (e.g., environmental attributes)
- It is proposed that proposal prices will be submitted as $/ MW-month in UCAP, and the pricing evaluation will be **"pay-as-bid"**
- Recognizing that this RFP is targeted at existing resources to meet reliability needs, the contract will introduce non-performance charges for resources that cannot deliver their contracted capacity on time

Resource Eligibility

- The MT RFP will look to procure up to 750 MW UCAP of existing Ontario resources to meet the province's reliability needs

Eligible

- Contracted/off-contract Resources
- Merchant Resources
- Uprates (of the above)

Out of Scope

- Expansions / New build
- Imports
- DR, Inclusive of Hourly DR and Dispatchable Load

Further details provided on subsequent slides

1. Contracted / Off-Contract Resources

- Eligible resources will include those that are currently (or previously were) under contract with IESO or OEFC with an expiry date before April 30, 2027

Eligible Resources

Transmission-Connected (Directly Connected) Market Participants (MP)

Distribution-Connected (Embedded) MPs

Embedded Non-MPs

2. Merchant Resources

- The scope of this initial MT RFP is on existing assets, therefore in addition to previously contracted resources, the IESO proposes allowing participation of existing merchant resources
- Merchant resources include those that:
  - ✓ May not have been previously contracted as generators with the IESO in the past, but;
  - ✓ Have previously been registered as a Market Participant or Ancillary Service Provider
  - ✓ Have necessary permits and interconnection agreements in place at the time of proposal submission

3. Uprates

- To further enable competition it is proposed that MT RFP allow for some moderate uprates to all eligible facilities (i.e. contracted resources and merchant resources)
  - Examples of uprates could include incremental capacity attained through software upgrades and/or replacement of ageing equipment
- The scope of uprates will be limited to those that do not change facility permits or regulatory requirements, and to those that already have connection agreements in place
  - This will ensure facilities are well positioned to meet their capacity obligation from the beginning of the 2026 commitment period

Resource Eligibility (cont'd)

- While broader eligibility is a goal for subsequent MT RFPs to drive increased competition, it might have some unintended outcomes for this first MT RFP
  - Contracting less certain new capacity, potentially forcing existing facilities to exit if they are not successful, thus impacting reliability
  - It may also have an indirect impact on the Capacity Auction by pulling resources out of the auction into the RFP
- As such, this first MT RFP will exclude new build, expansions (e.g. hybrids - adding storage to existing renewable generators), directly-connected loads with behind-the-meter generation and virtual hourly demand response (HDR)

Proposal Evaluation

Similar to other procurements, the MT RFP will utilize a four stage evaluation process

These are further explained on subsequent slides

1. Completeness Requirements

- The evaluation of **completeness requirements** will be undertaken in a pass/fail manner; meaning that if a proposal does not contain all required material, forms and declarations, that proposal fails and is not evaluated further

Examples of completeness requirements:

- Required forms/documents
- Completed document fields/signatures
- Submission of fee/security

2. Mandatory Requirements

- The evaluation of **mandatory requirements** will be undertaken in a pass/fail manner; meaning that a proposal that does not meet **all** mandatory requirements would fail and not be evaluated further

Examples of mandatory criteria:

- Ownership/control over facility and site
- Validity of permits and other regulatory obligations
- Connection agreements and market participation agreements

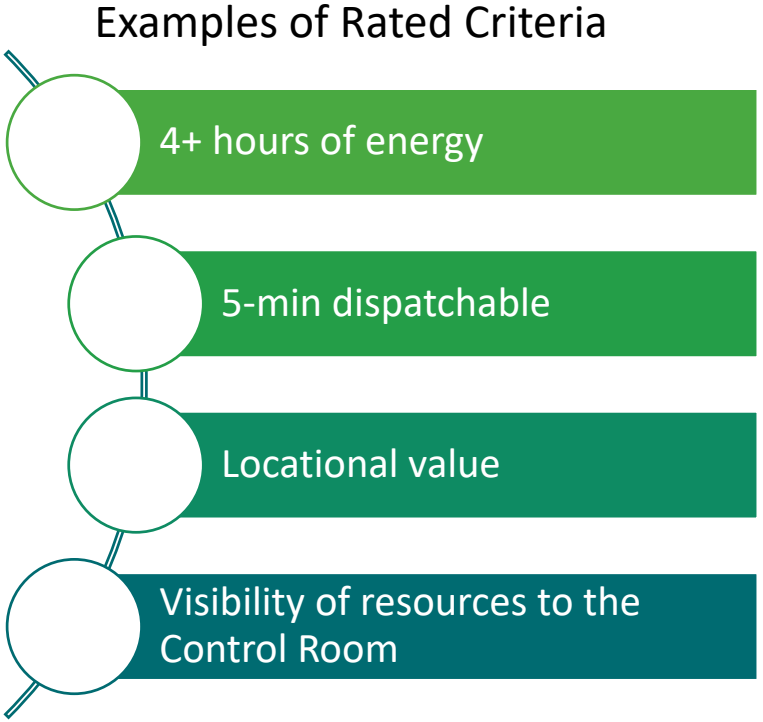
3. Rated Criteria

- Recognizing that the start of the MT RFP commitment period will be in a post-MRP world and that the renewed market will provide price signals and incentives to stakeholders that are not yet fully quantifiable, the IESO intends to design the MT RFP to evaluate attributes that provide higher value from a system and operational perspective

- It is proposed that the MT RFP evaluation process include rated criteria that assess characteristics that provide system value in an attempt to mimic the post-MRP market drivers

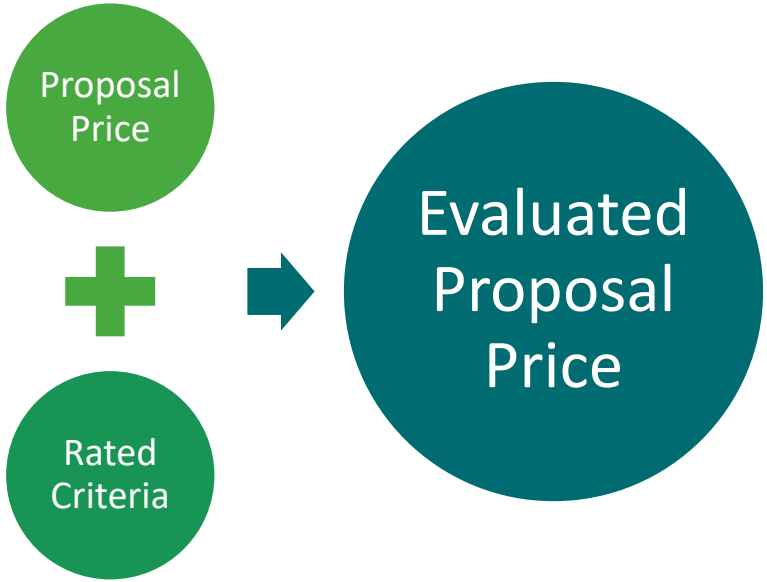
3. Rated Criteria (Continued)

- It is proposed that the RFP will utilize rated criteria as part of the proposal evaluation to value operational and system need attributes
- The rated criteria score will impact the price evaluation and proposal ranking stage
- Exact attributes are in the process of being defined and their respective weighting is still under development, however, the adjacent criteria are examples



4. Evaluated Proposal Price

- Proponents will submit pricing with their proposal reflected in a dollars per MW-month of their qualified capacity ($/MW – month UCAP)
- If a proposal successfully passes completeness and mandatory checks, it will be assigned points based on the rated criteria in the RFP
- Those rated criteria points will then modify the proposal price to create an evaluated proposal price (i.e., potential for rated criteria to alter proposal rankings)



Contract Expiry and Bridging

- The IESO is cognizant that there are a number of resources with contracts expiring at different times leading up to the commencement of the MT obligation period
- The Capacity Auction (CA) is an opportunity for resources to bridge to the start of the MT RFP commitment period
- Currently not all resources eligible for the MT RFP are enabled in the CA; the IESO will work to ensure these resources are enabled to participate in the CA prior to their contract expiry date

Bridging Considerations

The IESO is considering the following options to align expiring contracts with the start of the MT commitment period:

Resources with contracts expiring prior to April 30, 2026	Resources may opt to terminate their contract early to align with CA commitment periods or the start of the MT RFP commitment period, or they may opt to participate in the CA in the commitment period in which their contract expires
Resources with contracts that expire after May 1, 2026 but before April 30, 2027	Resources may be eligible to participate if they terminate their current contract early (i.e., terminate as of April 30, 2026)

Proposed changes will require the IESO to modify market rules to enable currently contracted resources to participate in the Capacity Auction

Pre-Procurement Engagement

- The IESO will use this engagement session and a subsequent September engagement session as an opportunity to present certain elements of the procurement to stakeholders and to seek their feedback
- The subsequent session will aim to provide additional detail and considerations for stakeholders to comment on
- These comments and this early engagement work are crucial to the IESO's work in drafting and finalizing documents
- Stakeholders will have additional opportunities to comment on the specific draft documents, thus helping to form final versions of the MT RFP and Contract

Qualifying Capacity in the Medium Term RFP

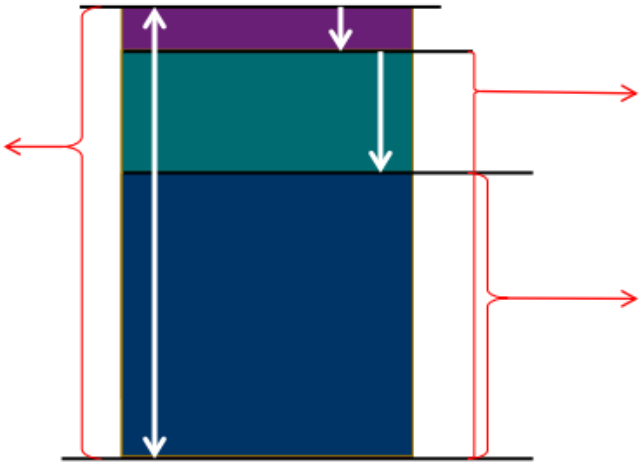
UCAP - Background

- The IESO intends to qualify resources on a UCAP (Unforced Capacity) basis to meet resource adequacy needs as it provides a level playing field amongst a diverse set of resources
- UCAP also ensures that resources are compensated according to the reliability value they provide
  - This is considered a key measure to ensure resource performance and alignment with adequacy needs
- The MT RFP will look to harmonize its UCAP methodologies with the Capacity Auction, and also align with existing approaches used in IESO Planning reports, as applicable

Product

- Transitioning from ICAP to UCAP across all IESO resource adequacy mechanisms will ensure Ontario is well positioned to meet reliability needs over the next decade

Nameplate Capacity - a resource's full-load output capability as provided by the manufacturer



ICAP - represents a resource's expected capacity that accounts for seasonal and ambient weather conditions

UCAP - represents a resource's un-forced/effective capacity (i.e., ICAP value further reduced by forced outage)

Alignment with the Capacity Auction

- Over the course of Q2/Q3 the IESO's Capacity Auction team have developed a number of resource-specific UCAP methodologies based on feedback from stakeholders
  - Stakeholder feedback on these proposed methodologies was due by August 13 and further discussion with stakeholders may be required before these methodologies are finalized in advance of the 2022 Capacity Auction and MT-RFP
- Where there is no UCAP methodology proposed for the auction (i.e. wind and non-market participants), the MT RFP will introduce an approach that is consistent with other IESO UCAP methodologies used

Alignment with the Capacity Auction (Continued)

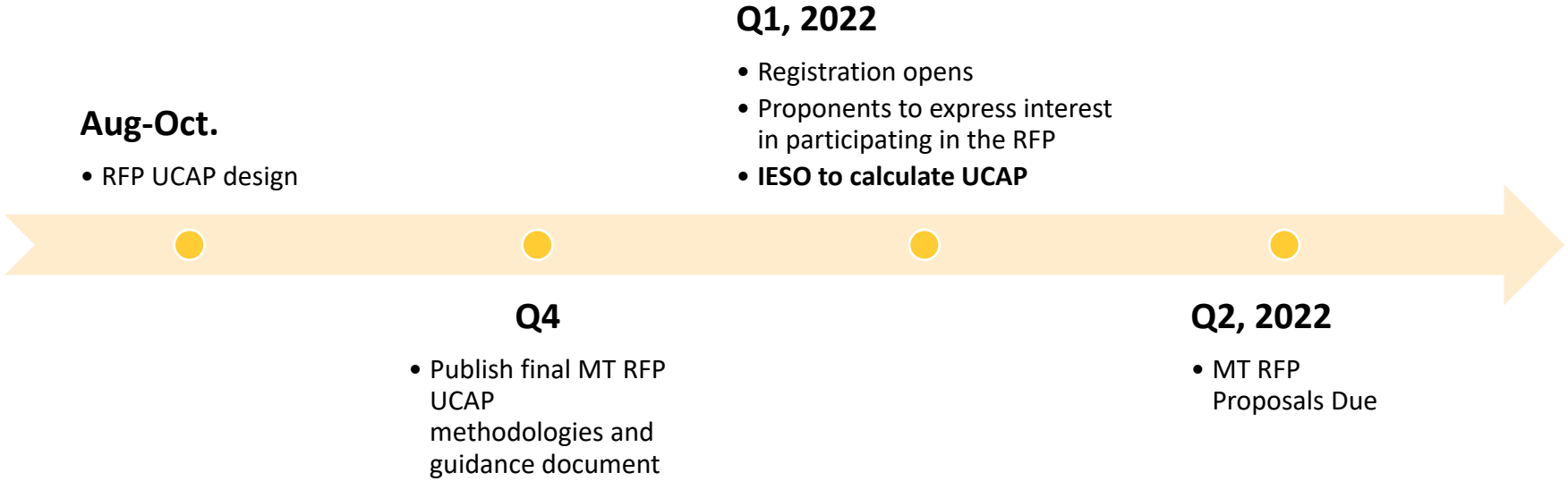
- The table illustrates UCAP methodologies contemplated under the Capacity Auction for a sub-set of technologies
- UCAP for wind and non-market participants could also use an approach that considers the 'top 200' hours of Ontario demand (~5% of peak hours/year)

Indicative – Currently contemplated through the Capacity Auction

Technology	Capacity Auction methodologies
Thermal	UCAP (MW) = ICAP (MW) ∗ (1 – EFORd)
Hydro	UCAP (MW) = ICAP (MW) × Production Data in Top 200 hours of Ontario Demand
Storage	UCAP (MW) = [min(Full Power Operating Mode, Energy Rating/4hrs)]*(1-EFORd)

High Level – Operationalizing UCAP

- Stakeholders have informed the IESO that sufficient lead time is needed on UCAP ahead of preparing any proposals



UCAP – Next steps for the MT-RFP

September

- Further detail will be provided on UCAP methodologies for all resources eligible in the MT RFP
- Additionally, information will be shared on how UCAP is expected to be operationalized for the MT RFP (timelines and processes associated with providing UCAP values)

October

- Final MT RFP UCAP methodologies will be shared and a guidance document will be published to help stakeholders estimate their UCAP value

Next Steps and Stakeholder Feedback

Stakeholder Feedback

Stakeholders are invited to submit questions and provide general feedback on the information presented regarding the Medium-Term RFP

Specific areas of design that the IESO is seeking feedback on include:

1. The evaluation process
2. The bridging mechanism
3. The UCAP approach
4. Contractual considerations

Please provide all written feedback to **engagement@ieso.ca** by September 17 using the feedback form on the engagement webpage

Next Steps

- The MT-RFP agenda for the **September 2021** Resource Adequacy meeting is expected to include:
  - Further information on contract design, proposal evaluation and criteria
  - Further detail on UCAP in the context of the MT RFP and technology specific methodologies
- Later this Fall, the IESO will share a draft RFP and contract for stakeholder comment
- During Q4, the IESO intends to begin communicating preliminary information on the LT RFP

Thank You

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