

APRIL 20, 2022

LT1 RFP Engagement

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Agenda

- Annual Acquisition Report (AAR) Overview
- Additional Procurement Mechanisms
- Proposed Revisions to RFQ
- LT1 RFP Design Considerations
 - Revenue Streams
 - Mandatory requirements
 - Rated criteria
- Next Steps
- Stakeholder Feedback From March 10 Engagement

Purpose

- Discuss additional procurement mechanisms to meet the IESO's 2025 needs identified in the 2022 Annual Acquisition Report (AAR)
- Continue discussion on LT1 RFP design, including exploring proposed mandatory requirements and rated criteria for Indigenous participation
- Provide an overview of stakeholder feedback received on the draft LT1 RFQ and proposed changes to the RFQ
- Provide an overview of stakeholder feedback from the March 10 engagement



Annual Acquisition Report (AAR) Overview

The AAR develops a suite of solutions to address previously identified needs

Process

1. Identify Needs



Medium

Annual Planning Outlook, quarterly Reliability Outlooks, Transmission Plans

2. Identify and Assess Potential Solutions*

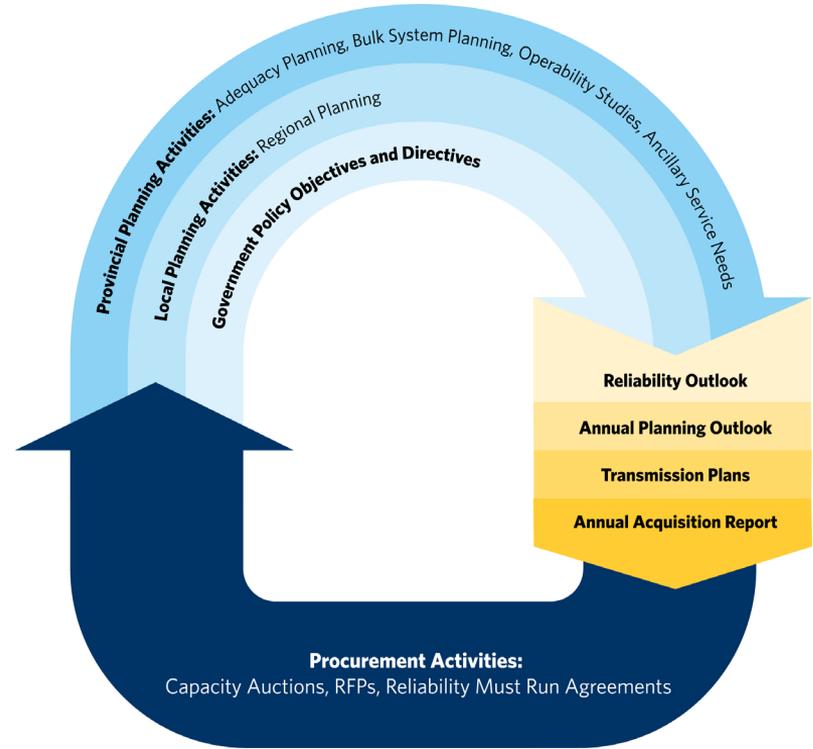


Annual Acquisition Report (AAR)

3. Implement Solutions*

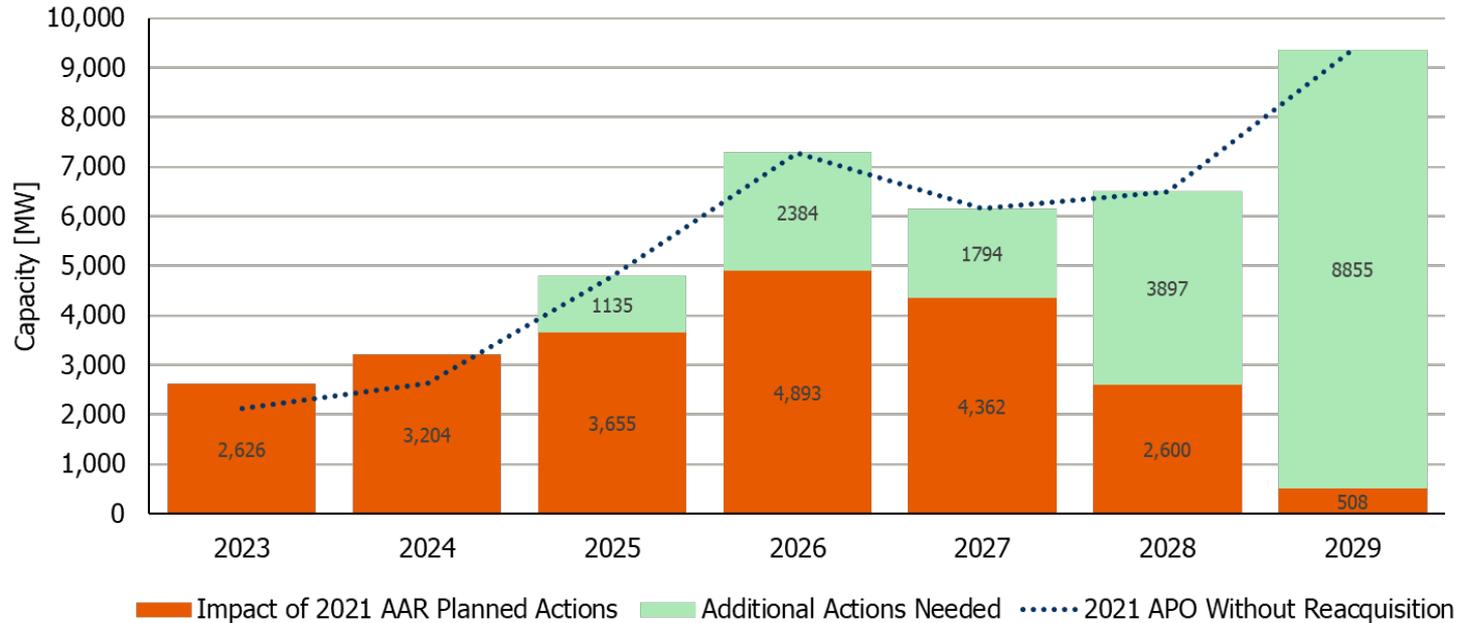


Procurement Engagement and Documents

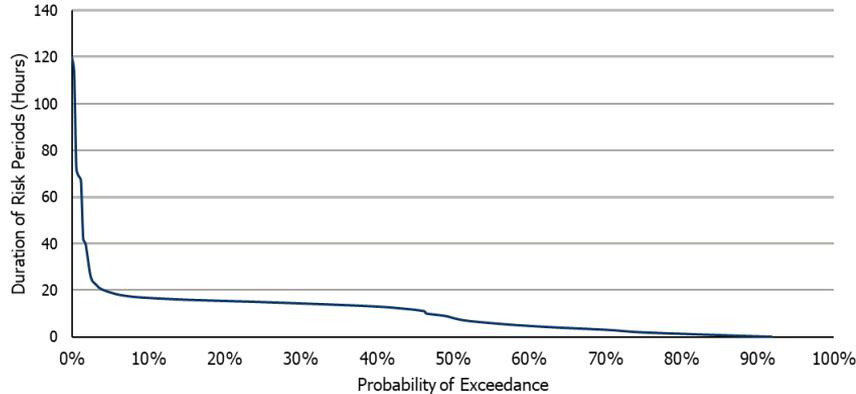


*The Resource Adequacy Framework provides a suite of tools that can be leveraged to address needs

The 2022 AAR builds off the 2021 APO, AAR and recent policy decisions



Incremental capacity is required for longer durations of time



Estimates of duration needs were developed using the resource adequacy simulations from the 2021 APO with re-acquisition of existing resources for **2029**

Incremental resources (e.g. growth in capacity auction targets, upcoming RFPs) were not incorporated into the simulations

Additional Information

- Risk periods are events in at least one simulation where demand exceeds available resources
- The acquisitions aim to reduce risk periods to <0.1 days/year (~99.98% reliability), aligned with NPCC criterion
- Reliability models are not designed to estimate frequency of dispatch. This is estimated using production dispatch models and information on bidding strategies
- The annual planning process allows the IESO to assess reliability using the most up-to-date resource information

Addressing Needs Prior to 2027

Planned Actions Underway

- Executing the Medium-Term I RFP to acquire capacity from existing resources
- Exercising the existing Hydro Quebec Capacity Sharing Agreement in 2026
- Acquiring incremental capacity by growing the annual capacity auction
- Including an early operation incentive under Long-Term I RFP to incent resources able to meet in-service dates in 2025/26

Proposed Actions to be Explored

- Adjusting nuclear outage schedules
- Additional energy efficiency
- Additional mechanisms to work alongside acquisition mechanisms already underway
 - Expedited procurement
 - Same technology expansions
 - Forward capacity auction

Actions work together to ensure reliability & manage uncertainties

2022
-
2024

Solutions are in place to meet needs as a result of efforts already underway.

2025
-
2026

Supply needs increase following Pickering retirement. The IESO will work with sector participants and communities this summer to confirm options to best meet these needs.

2027
+

Longer-term electricity demand continues to grow requiring new supply solutions beyond what is already planned.

SOLUTIONS

Short
Term

- Increase annual capacity auction target

Medium
Term

- Five-year contracts with existing resources (MT I RFP)

Long
Term

- Contracts with generators to meet local reliability needs or policy needs

- Increase annual capacity auction target
- Capacity Sharing Agreement with Quebec

- Multi-year capacity auction
- Five-year contracts with existing resources (MT I RFP)

- New energy efficiency programs
- Expansion of existing facilities
- Expedite new facilities

- Capacity auction target adjusted based on need

- Five-year contracts/expansions and upgrades (MT II RFP)

- New capacity, including new facilities (LT RFPs)



High-level Overview of Additional Acquisition Mechanisms to Meet 2025 Capacity Needs

Meeting Emerging Needs in 2025

- The 2022 AAR shows that capacity needs in the years up to and including 2024 are expected to be met through existing resources and the plans already identified in the 2021 AAR
- However, based on increased demand, the retirement of Pickering Nuclear Generating Station and expiring contracts, the needs emerging in 2025 will require action beyond what was projected last year
- The 2022 AAR outlines a number of actions to address reliability needs identified in the most recent APO, including employing acquisition mechanisms that are additional to those outlined in 2021 AAR and the Resource Adequacy framework
- The additional acquisition mechanisms proposed by the IESO for stakeholder feedback are informed by both the emerging system needs and stakeholder feedback on potential projects that could be deployed in various time periods

Working on Options with Stakeholders

- The IESO continues to engage with stakeholders to understand what options are available to provide new or incremental capacity to the IESO-Administered Markets as early as 2025
- The information provided by stakeholders is critical in proceeding with the proposed additional procurement solutions
- The IESO is focused on ensuring advanced projects have the highest chance of success to come into service for 2025 through the expedited process, while also ensuring growing longer-term needs are met through the LT1 RFP
- Incenting expansions and leveraging the auction will assist with the need and mitigate risks associated with new project development

Overview of Proposed Additional Mechanisms

Expedited Procurement

- An expedited procurement stream for qualified proponents with advanced **new-build resources** that are able to enter service as early as 2025

Same Technology Expansions

- Expansions or updates to **existing resources** that can provide firm capacity as their primary product

Forward Capacity Auction

- An additional auction in 2023 that would commit capacity for a **three-year period** from 2024 to 2026

Leveraging LT1 Engagement

- The IESO will seek to leverage engagement on the LT1 RFP to inform the design of the expedited procurement and will align procurement considerations and/or requirements where applicable (i.e., leveraging the LT1 Contract for both procurement mechanisms)
- The IESO proposes that both procurement mechanisms utilize the **same RFQ** process to qualify applicants
- Draft procurement documents will be posted for the LT1 RFP and expedited procurement on **August 1**, after which the IESO will focus on finalizing the expedited procurement by end of Q3 2022

The IESO proposes to leverage the existing LT1 RFP stakeholder engagement to develop the expedited procurement in parallel with the LT1 RFP

Value of the RFQ 1/2

- The IESO's past experiences have shown that having a pre-qualification stage to a procurement ensures a more efficient process in a number of ways:
 - It focuses the overall engagement process and the design discussion of the RFP and contract
 - It ensures downstream processes (deliverability, CIA and SIA, etc.) are limited to prequalified proponents, ensuring the IESO is in a better position to manage the volume within the proposed schedule
 - The proposal evaluation process will be more efficient as higher quality proposals will come forward and the evaluation can be narrowed to fewer criteria
 - Impacted third parties (municipalities, indigenous communities, ministries, LDCs) can prioritize and focus their processes on those who are qualified

Value of the RFQ 2/2

- In light of the emerging need and the tight timelines, it is important that the overall process works as effectively and efficiently as possible
 - The IESO will revisit the qualification requirements for subsequent procurements

Role of the LT1 RFQ

Long-Term Request for Qualifications (LT1 RFQ)

- Objective is to ensure that there are interested parties with the capability to undertake project development, construction and operate facilities
- RFQ will focus on evaluating proponents based on their technical and/or development capability, experience working with Indigenous communities, and financial wherewithal
- Only qualified proponents under the RFQ will be eligible to participate in the expedited procurement and LT1 RFP

Long-Term Request for Proposals (LT1 RFP)

- Objective is to solicit proposals from qualified proponents and offer contracts (15-year term) for projects that most competitively meet local and provincial needs
- LT1 RFP will procure 2,500MW of new capacity for needs arising in the **2027+ timeframe**

Long-Term Expedited Procurement

- Objective is to solicit proposals from qualified proponents and offer long-term contracts for advanced projects that most competitively meet local and provincial needs
- Under this process, the IESO will procure resources that can meet needs arising in the **2025 timeframe**

RFQ Requirements

- The IESO has revised the draft RFQ (1) to account for leveraging this process for the expedited procurement and (2) in response to stakeholder feedback
 - The revised requirements are outlined later in this deck and stakeholders are encouraged to review the revised draft RFQ
- One important consideration to highlight is that those interested in the expedited procurement will have to meet more stringent prequalification requirements
- This will allow the IESO with greater certainty that the projects procured for 2025 have a higher likelihood of meeting a 2025 in-service date
- Others will still have the option to pre-qualify for the LT1 RFP and take advantage of the early operation incentive

Expedited Procurement 1/2

- The expedited procurement stream for new-build resources could provide an option for resources that are advanced and are confident that they can meet an in-service date of 2025
- It will require a balancing of incentives to encourage participation, with more significant performance security/obligations to ensure commercial operation is achieved in time and 2025 capacity needs are met
- Proponents seeking to participate in the expedited procurement will need to show that their project is sufficiently advanced. For example, the IESO is considering requiring site control, evidence of having supply chain and financing lined up, and a Municipal Council Support Resolution or an Indigenous Community Support Resolution (depending on where the project is proposed)

Expedited Procurement 2/2

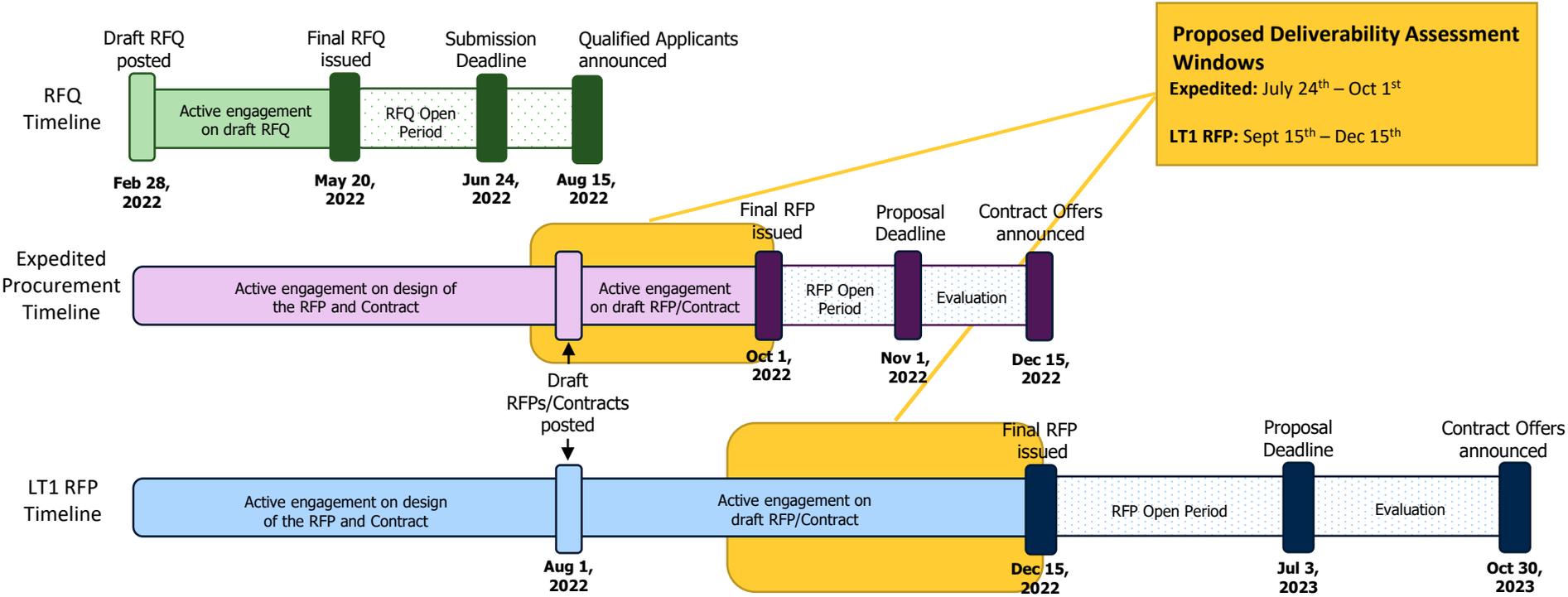
- To help facilitate a successful expedited procurement, the IESO is seeking feedback on the following questions:

Considering higher security amounts, what incentives are sufficient to encourage expedited project development to meet the 2025 needs (e.g., increased term length, price adders, reduced RFP requirements)?

What evidence can proponents include in the proposal to show the advanced stages of project development

Is there any other external support (e.g., from the IESO) that would be needed to help proponents meet expedited development timelines?

Expedited and LT RFP Procurement Timelines*



*All future dates are tentative; 2022 and 2023 timelines are not to scale.

Timeline and Schedule Highlights and Questions

- **May 20, 2022:** Final RFQ Issued
- **August 1, 2022:** Draft LT1 RFP/Contract (including for expedited process) Issued
- **October 1 – November 1, 2022:** Expedited Procurement Open Period
- **December 15, 2022 – July 3, 2023:** LT1 RFP Open Period

- Are the proposed timelines acceptable to proponents?
- Do the timelines for the Expedited procurement offer sufficient time for proposal preparation?

Same Technology Expansions 1/2

- The LT1 RFP Questionnaire feedback indicated that a number of **existing facilities** may be interested in adding **incremental capacity** at their existing sites, through uprates or expansions of the same technology type
- The IESO is seeking stakeholder feedback to help develop a **separate streamlined process** to acquire incremental capacity from existing facilities
- The process would value **firm capacity** as the primary product to be acquired, and target those resources able to **expand or uprate**

Same Technology Expansions 2/2

- For those existing technologies that are looking to expand or uprate their facility, the IESO is seeking feedback on the following questions to help meet 2025 capacity needs:

What timelines (i.e., contract execution) and forward period would be required to support a 2025 in-service date?

What considerations regarding the existing contracts does the IESO need to consider in the design of the process?

Is there any other external support (e.g., from the IESO) that would be needed to help proponents meet expedited development timelines?

Forward Capacity Auction (FCA) 1/2

- The IESO proposes to utilize the existing annual capacity auction framework to run a **one-off** additional **forward capacity auction (FCA)** in 2023 that would secure capacity for a three-year period from **2024 to 2026**
 - The longer forward and commitment periods could provide greater investment certainty to potential participants to attract additional supply
- IESO would continue to execute the annual capacity auction for those commitment years to continue serving as a complementary short-term balancing mechanism
- The Forward Capacity Auction will be based on the enhancements that are proposed for the 2022 Capacity Auction

Forward Capacity Auction (FCA) 2/2

- Engagement on the FCA will be conducted under the auspices of Capacity Auction Engagement
- In order to develop the process the IESO is seeking feedback on a number of initial design considerations:

Expanded participation and eligibility for resources

Demand curve parameters

Interactions with the annual capacity auction including target capacities

Input into the design of longer forward and commitment period

Other business/stakeholder considerations associated with longer forward periods

Update on System Needs

- In alignment with the IESO's 2022 Annual Acquisition Report (AAR) released on April 4, the LT1 RFP will set out to procure **2500 MW of effective capacity** from resources able to meet the following requirements:

Inject at least **4+ hours** of continuous energy

Minimum **1 MW** in size to meet the requirements stipulated in Chapter 4 of the Market Rules

In-service from 2027 with a term length of **15 years**, with the option to come in-service as early as 2025 for an extended term length

- This capacity need is province wide, however, there will be a preference for resources located in the West and East of FETT*

*FETT = Flow East Towards Toronto

Procurement Targets and Needs

- Per the AAR, the LT1 RFP target will be 2,500 MW of effective capacity. The AAR assumes that the capacity will come into service by 2027
- The IESO is assessing information and feedback on the targets for the additional processes to ensure the targets balance meeting the need, while ensuring competition and accounting for risk mitigation of projects delays
 - The IESO expects that the expedited process could deliver between around 1,000 MW
 - The expansions process and the auction could each deliver an incremental ~500 MW
 - Together the IESO believes that the incremental need of ~1,100 MW in 2025 and ~2,400 MW for 2026
 - The early operation incentive under the LT1 RFP would act as risk mitigation in the event that the additional procurements do not yield sufficient capacity and/or projects are delayed

Summary Comparison

	LT1 RFP	Expedited Procurement	Expansion
Target capacity	2,500 MW of effective capacity	~500 to ~1000 MW of effective capacity	~500 to ~1000 MW of effective capacity
Term Start	No later than 2027	2025	2025
Term length	15 year term with potential additional term available for resources able to come online early	Minimum of 15 year base term	New contract or extension of existing contracts. Length of contract/extension dependent on stakeholder feedback
Locational considerations	Global need with strong preference for resources in the West and East of FETT zones	Targeted at meeting global need	Targeted at meeting global need
Eligible Resources	Technology agnostic; new-build resources at greenfield sites or co-located at existing sites able to achieve commercial operation no later than 2027.	Technology agnostic; new-build resources at greenfield sites or co-located at existing sites; must achieve commercial operation by 2025.	Expansions or uprates to existing resources that are under contract and operating in IESO-administered markets. Expansion or uprate must be the same technology as the existing resource and able to achieve commercial operation in 2025.
Qualification	Participation in LT1 RFQ Required	Participation in LT1 RFQ Required	Existing counterparty in good standing with existing contract



Draft LT1 RFQ Feedback and Proposed Revisions

Overview

- The following slides highlight key themes of feedback received on the draft RFQ, and the IESO's proposed revisions to the RFQ in response to that feedback
- An update version of the draft LT1 RFQ, reflecting the changes outlined in subsequent slides will be posted following today's engagement session and stakeholders will be able to provide comments until **May 2, 2022**
- The IESO intends to issue the **final LT1 RFQ** by **May 20, 2022**

RFQ Feedback

- Stakeholder feedback in response to the draft LT1 RFQ focused on 4 main topics:
 - 1.Mandatory Experience Thresholds
 - 2.Behind-the-Meter Experience
 - 3.Market Operating Feedback
 - 4.Other
- The goal of the RFQ is to ensure that interested parties have sufficient **financial capacity and experience** to participate in the LT I RFP, in order to meet these emerging needs
- In light of stakeholder feedback and the goals of the RFQ, the IESO is proposing modifications to the RFQ requirements for the LT1 RFP

Summary of Key Changes

RFQ Feedback Theme	Key Changes
1) Mandatory Experience Thresholds	The IESO has focused mandatory requirements on Team Member Experience and introduced higher security amounts in lieu of entity level experience thresholds.
2) Behind-the-Meter Experience	The IESO has included behind-the-meter experience as part of the Small-Scale Entity Development Experience Threshold
3) Market Operating Feedback	The IESO has removed the Market Operating Experience previously requested in the RFQ and instead is requesting that applicants provide information to the IESO to indicate how that experience will be met at the contract/ RFP stage.
4) Other	Additional changes to the RFQ have been made, including expanding the time period for eligible projects for Large-Scale Entities, allowing like-for-like substitution of qualified team members from and others.

Team Member Mandatory Requirements

Large-Scale Team Member Experience	Small-Scale Team Member Experience
<p data-bbox="92 401 772 447">2 Designated Team Member</p> <p data-bbox="92 478 859 642">Experience in each of the Planning, Developing, Financing, Constructing and Operating of at least</p> <p data-bbox="92 711 879 757">1 Qualifying Large-Scale Project</p> <p data-bbox="92 823 691 862"><i>(No change from February 28 draft)</i></p>	<p data-bbox="952 401 1690 447">2 Designated Team Members*</p> <p data-bbox="952 478 1719 642">Experience in each of the Planning, Developing, Financing, Constructing and Operating of at least</p> <p data-bbox="952 711 1738 757">1 Qualifying Small-Scale Project</p> <p data-bbox="952 823 1758 904"><i>(*Changed from 1 team member in February 28 draft)</i></p>

Large-Scale Entity Development Experience Threshold

The RFQ Applicant or its Control Group Member must have directly owned, or Controlled a Person that directly owned, **2** or more operating Electricity generation or storage facilities:

- a) With a nameplate capacity of at least **5 MW**;
- b) That are not Behind-the-Meter Facilities; and
- c) That have achieved commercial operation in any jurisdiction in Canada or the United States no more than **fifteen (15)** (*changed from 10 years in February 28 draft*) years prior to the date of the Qualification Submission

Small-Scale Entity Development Experience Threshold

The RFQ Applicant or its Control Group Member must have directly owned, or Controlled a Person that directly owned, **5** or more Electricity generation or storage facilities:

- a) With a nameplate capacity of at least **500 kW** and
- b) That have achieved commercial operation in any jurisdiction in Canada or the United States no more than **five (5)** years prior to the date of the Qualification Submission

For greater certainty, a Qualifying Small-Scale Project **may include a Behind-the-Meter Facility** (*changed from February 28 draft*).

Qualification: Expedited Procurement

- Based on the feedback from the Questionnaire, the IESO proposes that only Large-Scale LT1 Projects will be eligible to participate in the expedited procurement
- Due to the reliability drivers for 2025, in order to qualify for the Expedited procurement, applicants must meet the following requirements

Meet Large-Scale Team Member Experience Requirements

Meet Large-Scale Entity Development Experience Threshold

- For clarity, those who qualify for the expedited process will automatically qualify for the LT1 RFP

Qualification: Large-Scale LT1 Projects

- Proponents who do not meet the entity level threshold, can still qualify for submitting proposals for one or more Large-Scale Projects into the LT1 RFP, by meeting the following requirements:

Meet Large-Scale Team Member Experience Requirements and;

Post **1.5X** proposal security if unable to demonstrate Large-Scale Entity Development Experience

OR

Meet Small-Scale Team Member Experience Requirements and;

Meet Small-Scale Entity Development Experience Threshold + Post **1.5X** proposal security

Qualification: Small-Scale LT1 Projects

- Proponents interested in the small scale project category can qualify to submit proposals for one or more Small-Scale LT1 Projects by meeting the following requirements:

Meet Small-Scale Team Member Experience Requirements and;

Meet Small-Scale Entity Development Experience Threshold

OR

Meet Small-Scale Team Member Experience Requirements and;

Post **1.5X** proposal security if unable to demonstrate Small-Scale Entity Development Experience

- For clarity, applicants qualified for Large-Scale LT 1 Projects, will be eligible to submit proposals for Small-Scale LT1 Projects.

Proposal Security for the LT1 RFP & Expedited Procurement

The following are proposal security amounts that the IESO is proposing for the LT 1 RFP and expedited procurement.

	LT 1 RFP	Expedited Procurement
Base Proposal Security – Large-Scale LT1 Project	\$30,000/MW with a \$500,000 minimum	\$50,000/MW with a \$500,000 minimum
Base Proposal Security – Small-Scale LT1 Project	\$30,000/MW with a \$300,000 minimum	N/A – Only Large-Scale LT1 Projects are Eligible for the Expedited Procurement
1.5 X Proposal Security Where Totality of Entity Development Experience Threshold is not met	\$45,000/MW	N/A – Only those parties able to meet both mandatory requirements and ALL Large-Scale Entity Development Experience Threshold are eligible for the Expedited Procurement

RFQ Requirements – Additional Feedback Received

- Stakeholder feedback on the RFQ was varied, with some stakeholders supportive of the draft requirements and others pointing to the limiting nature of those requirements on some potentially viable projects put forth by experienced developers
- This revised approach, as described in the previous slides seeks to further mitigate the risk that projects procured for a 2025 term start are available when required
- Additional feedback and IESO proposed changes are described in subsequent slides

Key Theme 1: Behind-the-Meter Participation

Stakeholder Feedback	Proposed Change(s)
<ul style="list-style-type: none">• Several stakeholders noted that the front-of-the-meter project experience requirement is a significant barrier for qualification in the small scale projects.• Stakeholders recommended that the IESO allow for behind-the-meter experience, particularly as most storage developed in Ontario has been behind-the-meter	<p>The IESO is proposing that Small-Scale Entity Development Experience Threshold be satisfied with developing at least 5 projects, either behind-the-meter or front-of-the-meter.</p>

Key Theme 2: Project Size

Stakeholder Feedback	Proposed Change(s)
<ul style="list-style-type: none">• A number stakeholders inquired on the maximum project size.• Several comments suggested that a 5 MW minimum will exclude many proponents as Ontario's large-scale project landscape is relatively small.	<ul style="list-style-type: none">• The IESO proposes to increase the maximum project size to 600 MW for the LT1 RFP to align with the increased capacity needs communicated through the Annual Acquisition Report (AAR)• Additional modifications to mandatory experience thresholds now allow for broader applicant participation.

Key theme 3: Expand Time Period for Eligible Projects

Stakeholder Feedback	Proposed Change(s)
<p>Considering that there has been very little in the way of new electricity projects 5 MW and above reaching commercial operations in Ontario over the last few years, there was a recommendation to increase the range for Large-Scale Entity Development Experience Threshold to 15 years.</p>	<p>The IESO understands the gap in large scale developments in Ontario over the past few years. While the RFQ also takes into consideration experience from other jurisdictions, the IESO proposes increasing the time range for the Large-Scale Entity Development Experience Threshold from 10 to 15 years.</p>

Key theme 4: Team Member Experience

Stakeholder Feedback	Proposed Change(s)
<p>Team members often change and It would therefore be reasonable to provide the opportunity to replace a qualified team member with a new member that also meets the RFQ requirements.</p>	<p>The IESO agrees with this comment and proposes making an edit in the RFQ to enable a like for like replacement of a qualified team member.</p>

Key theme 5: Market Operating Experience

Stakeholder Feedback	Proposed Change(s)
<p>Stakeholders do not believe the “market operating experience” as contemplated in the RFQ is appropriate. Feedback requested that the IESO allow for the use of consultants who specialize in offering this kind of service.</p>	<ul style="list-style-type: none">• The IESO will remove the market operating experience from the RFQ and instead request that applicants submit high level details as to how they satisfy market operating requirements (i.e., via team member experience or third party entity) should they be successful under the LT1 RFP or expedited procurement.• The IESO may request additional evidence at the RFP stage to ensure Proponents have market operations experience.

Key theme 6: Indigenous Participation

Stakeholder Feedback	Proposed Change(s)
<ul style="list-style-type: none">Stakeholders noted that Indigenous engagement and ownership is crucial to the success of any new build infrastructure project in Ontario.Some asked the IESO to consider a requirement that entities must demonstrate a % of Indigenous ownership in order to participate.	<ul style="list-style-type: none">The IESO agrees with the importance of Indigenous participation in Ontario infrastructure projects, and is seeking to reflect this through the RFP rather than the RFQ, which is solely focused on qualifying applicants – not specific projects.



LT1 Design Considerations: Revenue Streams

Re-cap

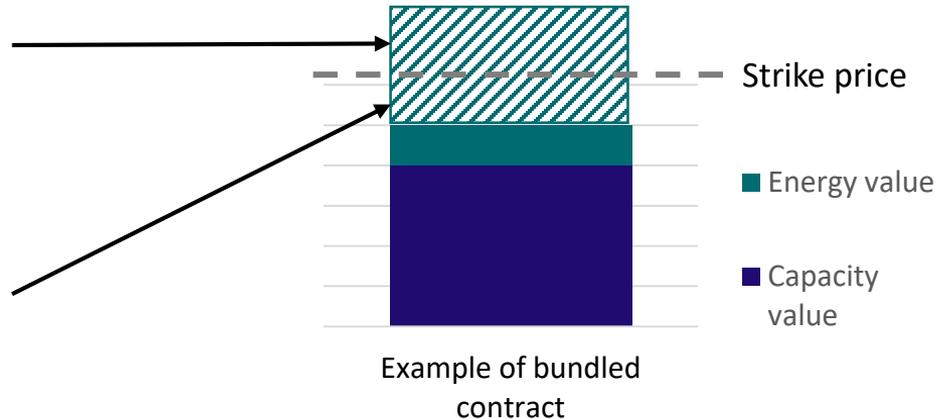
- At the March 10 engagement, the IESO committed to exploring contract structures that provide additional revenue certainty beyond a capacity payment
- The IESO committed to exploring two additional contracting options with stakeholders, specifically to better determine the correct trade-off between market efficiency, ratepayer risk/cost and investor certainty
- The IESO presented an approach that would pay for capacity and also provide a hedge for energy revenues at the last session
- Today's session will explore a Contract for Differences approach

Bundled CFD Overview

- Typically, a bundled CFD contract requires resources to bid in a **strike price in MWh** or **revenue requirement in MW (per month)** to be met over the term of the contract.

If monthly revenues are **above** the predetermined strike price/revenue requirement, the supplier will pay back the excess to the IESO

If monthly revenues are **less** than the predetermined strike price, the IESO will “top up” the supplier



Considerations: Contract Design Options 1/2

- A bundled CFD contract provides investors with increased revenue certainty, however it could minimize a resource's exposure to real time market signals, thus having a negative impact on overall market efficiency
- A well designed bundled CFD contract could subject payments to adjustment if must offer obligations are not maintained, or could be tied to volume of energy injected
- Additional considerations could introduce settlement adjustment based on meeting specific operating requirements (i.e., injection during specific peaks or supply constraints)

Considerations: Contract Design Options 2/2

- While a bundled CFD provides investors with predictable cash flows where post-MRP energy market uncertainty is present, the IESO is seeking a design that ensures that:
 - a) The LT 1 Contract incentivizes resources that can provide firm and reliable capacity
 - b) Resources participate in the market in an efficient manner, following price signals and ensuring that resources have the right energy market incentives

How can a bundled CFD be best designed in order to ensure resources adhere to energy market incentives, in exchange for investor certainty?

Bundled CFD – Options 1/2

The bundled CFD could take two distinct forms:

- 1) Linked to energy market prices, with a strike price set at a \$/MWh value, where beyond a capacity payment a CFD offers a supplier the ability to hedge against energy market price volatility by agreeing to a specific volume and price (the contract price)
- 2) Linked to a total revenue requirement \$/MW-month that includes both capacity revenues and energy market revenues

Bundled CFD – Options 2/2

- While a total revenue requirement bundled CFD is an easier concept to understand and a CFD linked to energy market prices is similar to the energy market hedge option explored during the March 10 engagement, the IESO was asked by stakeholders to consider a contract design option that mirrors that currently employed in New York State
- This option combines elements of both options presented earlier and provides a case study for how a contract resembling a “bundled CFD” can be applied

Case Study: New York 1/3

- As of 2020 New York transitioned away from fixed price (REC only) contracts towards a bundled structure that procures energy, capacity and REC value from developers
- The contract is structured as an **all-in contract** for a total amount that is anticipated to cover the resource's entire resource development cost, but the sellers are assumed to participate fully in NYISO energy and capacity markets where they will earn a portion of their revenues

Case Study: New York 2/3

- These contracts aim to manage the balance of risk between developers and consumers as pure hedging product (such as a traditional fixed-price, all-in contract) remove all market risk from developers and shift that market risk onto consumers
- Therefore, the NY index contract incorporates features that allocate a portion of the energy and capacity value risks to the seller, so that sellers maintain exposure to at least a portion of the market-based incentives to maximize their energy and capacity value
- The NY index contract is based on a monthly REC Price varies over the life of the contract and is calculated as the strike price minus a monthly offset indexed to energy and capacity prices

Case Study: New York 3/3

- Given that Ontario does not have a REC market similar to that present in other jurisdictions such as New York, or monthly spot capacity pricing adjustments would need to be made
- This contracting approach may introduce additional complexity as Ontario's Market Renewal Program is not yet in place

Contract Structure – Next Steps

- The IESO has received additional feedback on contract design including requests to examine contracting options beyond those reviewed thus far (i.e., examining California’s Resource Adequacy contracts)
- The IESO will continue to review feedback received on the contract structure options presented while conducting due diligence on alternative contracting designs, including those proposed by stakeholders
- During the May engagement session the IESO intends to present a more focused contract design based on feedback received and internal assessment



Proposed Evaluation Process for the LT1 RFP

The following slides provide an overview of the RFP evaluation process with some further considerations on Indigenous participation

Overview

- Applicants who have qualified through the RFQ process will have the opportunity to participate in the LT1 RFP
- The LT1 RFP evaluation will take a similar approach to the IESO's recent Medium-Term RFP by utilizing the following four stage evaluation process
- The Expedited procurement will employ a similar evaluation framework, with some requirements modified in order to assess projects that are further advanced and to ensure expedience



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

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
- The IESO would expect the expedited process to have similar criteria

Examples of mandatory criteria:

- Site control
- Fully dispatchable Market Participant
- Minimum 4-hours of continuous energy injection
- Evidence of meeting minimum Indigenous and municipal engagement requirements*
- Can inject at least once daily during the availability window

*Additional information provided on the next slide

Mandatory Requirements – Engagement Requirements

- For the LT1 RFP, the IESO proposes proponents be required to develop and post a **community engagement plan** on a dedicated website and hold **1 public meeting** with local communities to inform them of their proposed project
- In addition to a mandatory public meeting, the IESO is proposing that **all projects** electing to participate in the **Expedited process and the LT 1 RFP attain** either a **Municipal Council Support Resolution** or an **Indigenous Community Support Resolution**, depending on where the project is proposed

Rated Criteria 1/2

- The LT1 RFP will utilize rated criteria to evaluate proposals by assigning additional points to high-value attributes. The initial rated criteria categories are outlined below. The eventual categories and rated criteria weightings will be informed by engagement with municipalities, Indigenous communities and sector participants
- The IESO will assess which, if any, of the rated criteria will be part of the expedited process

Location

There are areas of the province (i.e. West and East of FETT) where resources are most needed

Duration of Service

Additional points to projects able to offer > 4+ consecutive hours of energy

Indigenous Participation

Projects able to demonstrate Indigenous participation (economic interest) will attain rated criteria points

Rated Criteria – Indigenous Participation

- The IESO is proposing that projects that are able to demonstrate Indigenous Participation in their project beyond a minimal level of demonstrable economic interest in the project (i.e., 10%) receive rated criteria points
- The IESO proposes that the rated criteria points awarded to projects that are able to demonstrate Indigenous Participation with an increasing allocation of points, dependent on economic interest. For example:

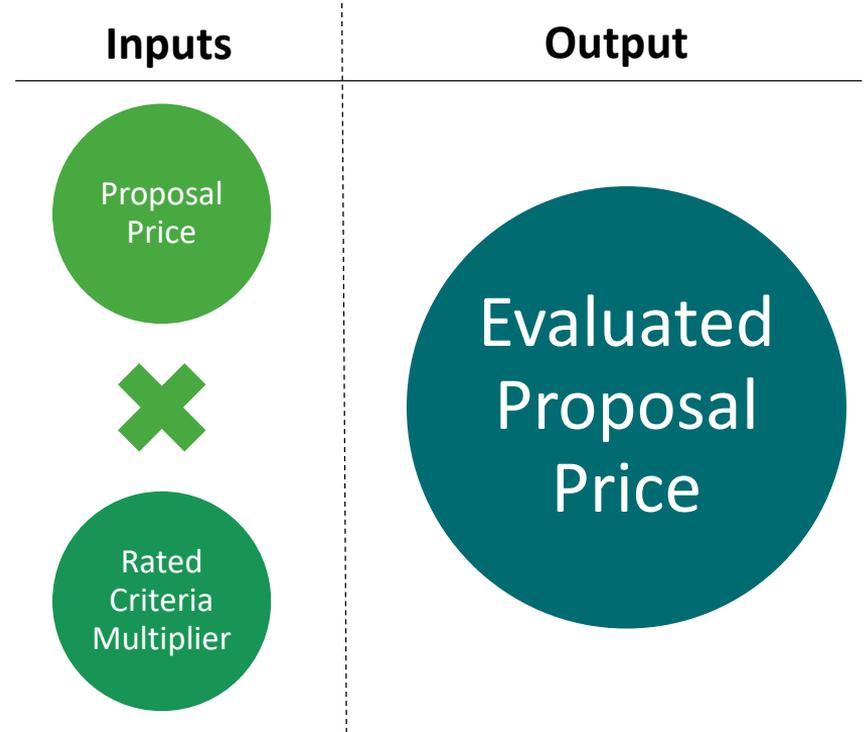
Projects with Indigenous economic interest greater than 10% but less than 25%

Projects with Indigenous economic interest greater than 25% but less than 50%

Projects with Indigenous economic interest greater than 50%

Evaluated Proposal Price

1. Proponents will submit pricing with their proposal
2. If a proposal successfully passes completeness and mandatory checks, it will be assigned points based on the rated criteria in the RFP
3. These rated criteria points will equate to a price reduction multiplier to be used for comparison/selection purposes only (**no impact on price paid to successful candidates**)





Next Steps

Next Steps

- The IESO will continue to engage on topics both noted in this presentation and follow up on previous topics (i.e. deliverability) to help further inform the draft RFP and Contract
- The IESO will revise the RFQ and aim to publish the final RFQ for both the LT1 RFP and expedited procurement by **May 20**
- Stakeholder feedback on this presentation is being requested via the feedback form by **May 1** to engagement@ieso.ca



Stakeholder Feedback – Key Themes

The following slides provide an overview of key themes from the written feedback received in response to the March engagement session. Formal IESO responses will be posted shortly.

Overview of Feedback Themes

Following the March 10, 2022 stakeholder engagement session, the IESO received feedback from 13 stakeholders on the following themes:

- Term Length
- Mandatory Requirements
- Deliverability
- Revenue Streams

Feedback Theme – Term Length

Stakeholder Feedback

- Stakeholders generally appreciated the change to the proposed contract term length from 7-10 years to 15-years, however many stakeholders further indicated that a 20-year term length would be preferred and would better align with other jurisdictions
- Some stakeholders suggested that the term length should better coincide with the useful life of the facility and inquired whether it would be possible to add flexibility to the contract term to reflect the lifespan of each technology

Feedback Theme – Term Length

IESO Response

- The LT1 RFP is intended to be a technology agnostic procurement that acquires system needs over a certain forecasted period. The IESO will therefore not be tailoring contracts to the expected lifespan of specific technologies
- The IESO will proceed with the 15 year term for the LT 1 RFP. The term will start May 1, 2027 and resources able to come in before that date will be able to have a longer term length
- The IESO is open to feedback on extended term length for facilities that opt for the expedited stream beginning in 2025 or those under the LT1 RFP able to achieve commercial operation early

Feedback Theme – Mandatory Requirements

Stakeholder Feedback

- Stakeholders requested further detail on the IESO's decision to have the 4-hour production duration be a mandatory requirement instead of a rated criteria

Feedback Theme – Mandatory Requirements

IESO Response

- As discussed in the Annual Acquisition Report (AAR), periods of resource adequacy risk tend to be sustained for multiple hours at a time:
 - 30% of events persist for up to four hours;
 - 20% of events persist for more than 4 and up to 8 hours;
 - 25% of events persist for more than 8 and up to 16 hours; and
 - 25% of events persist for more than 16 hours.
- The LT1 RFP will look to reward resources able to provide greater than 4 consecutive hours, potentially through the rated criteria

Feedback Theme – Deliverability (1)

Stakeholder Feedback

A number of stakeholders requested additional detail on the IESO's proposed deliverability assessment, including whether those deemed "Not Deliverable" would fail to qualify for the RFP and whether costs associated with making a project "deliverable" could be considered as part of their LT1 RFP proposal submission

Feedback Theme – Deliverability (1)

IESO Response

- The IESO is currently considering whether to assess additional connection options for proponents where the deliverability assessment deems projects to be “Not Deliverable” in order to provide clarity ahead of proposal submission
- The deliverability test will be carried out for the existing electricity system with network upgrades that are fully committed for implementation. Any transmission upgrades beyond those fully committed will not be considered

Feedback Theme – Deliverability (2)

Stakeholder Feedback

Stakeholders sought additional feedback on projects deemed to be “Deliverable but Competing” and whether they would be able to proceed to the RFP stage and whether they would compete against one another for connection first, before competing against remaining RFP proponents.

Feedback Theme – Deliverability (2)

IESO Response

All projects that are deemed to be “Deliverable but Competing” will proceed to the RFP stage where they will compete against other proposals. Those proposals deemed to be “Deliverable but Competing” will be evaluated based on RFP criteria, including proposal price, prior to establishing a final ranking of proposals. Additional detail on the deliverability assessment process will be provided during the May stakeholder session.

Feedback Theme – Revenue Streams

Stakeholder Feedback

Many stakeholders indicated that more detail needs to be shared to determine whether the IESO proposal will work for energy storage

Some considerations included:

- Contracts that reimburse demand charges, global adjustment charges, and regulatory and uplift charges may provide more certainty for battery storage projects and reduce pricing
- Having proponents bid in a strike price (instead of a fixed contract parameter per technology) may yield the most effective pricing across all technologies

Feedback Theme – Revenue Streams

IESO Response

- The IESO continues to explore contract design options and will consider the feedback received to date
- The IESO will primarily value capacity/ resource availability and their ability to inject energy during the availability window
- While considerations for energy storage facilities are important in the design of the LT1 Contract, the IESO will continue to take a technology agnostic approach to procurement design, ensuring that the LT1 Contract ensures the products/services procured are able to meet emerging system needs

Thank You

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