Feedback Form

Long Lead-Time RFP – June 5, 2025

Feedback Provided by:

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To promote transparency, feedback submitted will be posted on the LLT RFP engagement page unless otherwise requested by the sender.

- ☐ **Yes – there is confidential information, do not post**
- ☐ **No – comfortable to publish to the IESO web page**

Following the LLT RFP June 5, 2025, engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on the items discussed. The presentation and recording can be accessed from the LLT engagement web page.

Note: The IESO will accept additional materials where it may be required to support your rationale provided below. When sending additional materials please indicate if they are confidential.

Please submit feedback to engagement@ieso.ca by June 17, 2025.

Resource Eligibility and Rated Criteria

Hydro Resources - Redevelopments

Do you have any information to share in support of expanding eligibility to include hydro redevelopments, expansions or upgrades?

- N/A

LDES Resources

Do you have any comments on the eligibility of LDES technologies?

We encourage stakeholders to submit recommendations on any other LDES technologies that you believe should be eligible along with supporting documentation (a) outlining why the suggested technology requires a long lead-time for development, and (b) demonstrating that it can operate reliably over the term of the LLT contract.

- ESC represents both commercially proven and emerging LDES technologies. While the IESO is proposing eligibility for commercially proven LDES technologies, there is a degree of uncertainty on the final criteria and how this should be interpreted. It is urgent for IESO to design LLT procurements in a manner that invites broad participation by a range of technologies. This inclusiveness will benefit the province by increasing competition and thereby lowering system costs. Developers of emerging LDES systems require a clear, stable, long-term contracting opportunity to move beyond the IESO grid innovation fund as the way to deploy these technologies within the grid.

- IESO noted that certain LDES technologies will require additional study to determine their benefits to Ontario and specifically mentioned multi-day energy storage as a resource in need of additional study. We agree that additional study will be valuable. However, such studies should complement and occur in parallel with LLT procurement and should not preclude developers from proposing technologies that have not yet been deployed in Ontario. Given the length of time developers require to invest in bringing new resources to market, especially new resource types, it is especially crucial for the IESO to first establish clear commercial opportunities for these resources so developers can begin the important work to develop a robust pipeline, secure deliverability, and meaningfully engage with communities. For this reason, we strongly support IESO in establishing a specific procurement for LDES resources and multi-day energy storage. The ESC and its members are willing to engage actively to ensure their technologies are not excluded from participation. This is particularly relevant given the long runway to 2034 and beyond for some LLT projects.

- ESC also believes that Compressed Gas Energy Storage should be an eligible resource for the procurement. With Compressed Air already on the list, this just broadens the category to contain other types of gases in addition to air. These other types of compressed gas projects can be contracted for 40 years.

- ESC has encouraged its members to provide this information to the IESO about the opportunities related to other LDES technologies

Technology Readiness Metric

- Questions from ESC continue around the definition of this, specifically as it relates to LDES technologies. ESC encourages the IESO to consider non-inverter vs inverter-based procurement for LLT resources as the technological differences and even deployment timelines are significantly different.

Treatment of Hydrogen Storage Opportunities

- Hydrogen Storage opportunities present a unique case but also present unique considerations for the IESO. For these types of resources which are LLT, they would require a more unique contracting mechanism potentially of similar design to that applied to the Atikokan Biomass facility. These resources can offer Very cheap capacity but would likely require a might require a predetermined capacity factor for the year as they can store energy over a long period of time and withdraw over a longer period of time.

Storage Duration & Rated Criteria

Do you have any comments or information to share regarding storage duration or rated criteria that the IESO should consider when evaluating projects under the LLT RFP?

- As it relates specifically to LLT and LDES technologies ESC would encourage the IESO to consider a few changes as it relates to round trip efficiency, Technology Readiness, and adjustments to RFP design considerations.

Round Trip Efficiencies

- IESO should consider softening the availability window for LDES technologies to maximize the capital value of these investments without penalizing certain technologies due to their roundtrip efficiencies.
- Currently the threshold is set at 80%, however this fails to account for other technology types and therefore ESC recommends lowering this to 50% to allow maximum storage technology participation. Additionally, this roundtrip efficiency of different technology types as presently set out would create problematic contract defaults for certain technologies.
- This is beneficial as mechanical storage technologies while lower round trip efficiencies they offer a 40-year design life, nearly double that of other technologies.

RFP Design Consideration

Proposal & Completion and Performance Security

Do you have comments on the proposed approach and security amounts?

- **While ESC welcomes IESO's proposal of multiple milestones for the proposal security, the upfront amount may still be too onerous for developers who are developing early stage, and higher-risk projects.**
- ESC believes that the IESO should **allow for a more flexible proposal security mechanism (including refundability of deposits under certain circumstances) that promotes early-stage projects to participate.**
- In Australia, AEMO's security deposit for their Long-Duration Energy Storage procurement during bid submission is $800k AUD and increases to a maximum of $4M once a contract is awarded.

Interdependent Hydro Facilities (Energy Only)

Do you have any comments or additional information to share with the IESO?

Specific project details may be shared in a separate document. Please include the following: list of individual facilities, including the capacity of each (in MW), that are looking to be considered under a single proposal, proposed project location/related river systems; and any other information you think would be helpful

N/A

Deliverability

Do you have any information to share to support the IESO in determining the approach to offering a project specific consultation (or assessment)? Specifically, the IESO is interested in better understanding what information proponents require, and when this is needed, prior to submitting a proposal.

- ESC feels very strongly that Transmission **Planning, Capacity Allocation, and Deliverability require greater transparency.** Careful consideration must be made with respect to the allocation of existing connection capacity, particularly in northern Ontario, where the majority of new (and higher capacity factor energy resource) hydroelectric projects are anticipated.
- **This means that a Flexible approach to Deliverability studies that capture the additional grid benefits provided by LDES technologies, and due to the long-lead time nature of the projects, allow for the required network upgrades.**
- Given the lack of line-of-sight on deliverability for LT2(c-1) Proponents, ESC believes the IESO should actively create a level-playing-field for all Projects, and that the requirement to rescind CIAs for Transmission-connected projects is well grounded in the IESO's previous LT2 guidance.

Long-Term Outages

Do you have any comments on the proposed approach to allowing suppliers to take one long-term outage for major maintenance activities during the contract term?

Specific details may also be shared in a separate document outlining the following: the nature of the work required as part of the long-term outage; the maximum duration of the outage (e.g., 6 months); and when the outage is expected to occur over the course of the contract term (e.g., year 20).

Contract Price Escalation

Do you have feedback for the IESO to consider when establishing the contract price escalation for contracted long lead time resources?

- We are pleased to see that the IESO has made changes to Exhibit J of the Contract to implement pre-COD escalation of the Fixed Price with the Consumer Price Index ("CPI"). This should help address the risk of supply chain inflation between the Proposal Submission Deadline and the Commercial Operation Date. CPI may not entirely reflect increase in prices due to tariffs.

General Comments/Feedback

Please include any other feedback that you think may be relevant to inform the IESO's report back to the Minister of Energy and Mines.

The IESO needs to consider expanding the procurement target size for LDES to 1,000 MW or more. This would send an appropriate signal to ESC members about the commitment Ontario and the IESO have toward long-duration energy storage. Furthermore, a larger procurement will help the Province meet its supply needs in the 2030s and allow the Province to conduct a more competitively priced procurement. An expanded procurement will also increase optionality for the IESO and protect against attrition from contract award to commercial operation.