

# Stakeholder Feedback and IESO Response

## Long Lead-Time Request for Proposals (LLT RFP) – August 13, 2025

Following the [June 5 2025, LLT RFP Engagement Webinar](#), the Independent Electricity System Operator (IESO) invited stakeholders to provide feedback on the following design items: Resource Eligibility, Term Length, Proposal and Completion and Performance Security, Rated Criteria and other procurement design considerations. Non-confidential feedback is posted on the [Long Lead-Time RFP Engagement Webpage](#). Feedback identified as confidential by stakeholders is not posted but reflected as part of the common feedback themes. Please reference the feedback forms for specific feedback as the information below is provided in summary.

### Note on Feedback Summary and IESO Response

The IESO appreciates the feedback received from stakeholders and communities. The tables set out below respond to the feedback received and are organized by topic.

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## A) Resource Eligibility – Hydro

Stakeholders provided mixed feedback on expanding eligibility under the LLT RFP to include hydroelectric redevelopments, expansions or upgrades. Specific feedback is cited below.

Feedback / Common Themes	IESO Response
<p><b>Provide clarity on the IESO’s approach to enable redevelopments, upgrades or expansions under the LLT RFP:</b> clarity needs to be provided as early as possible to support decision-making for existing facilities interested in pursuing redevelopment, upgrade or expansion opportunities.</p> <ul style="list-style-type: none"><li>• <b>The IESO should enable redevelopments, upgrades or expansions under the LLT RFP:</b> One stakeholder indicated that the LLT RFP should enable such investments by providing a mechanism for incremental energy and capacity to be bid into the RFP and harmonized with Small Hydro Program and Northern Hydro Program contracts for existing generation.</li><li>• <b>The IESO should not enable redevelopments, upgrades or expansions under the LLT RFP:</b> One stakeholder indicated that the LLT RFP should be limited to new-build projects only as the capital cost profiles of redevelopments, upgrades or expansions differ from those of new-build hydro projects and can result in a competitive advantage against new-build projects.</li></ul>	<p>The IESO is currently exploring participation opportunities for redevelopments, upgrades and expansions for hydroelectric facilities across a number of procurements under its resource adequacy framework, including the long-term and medium-term procurements.</p> <p>The IESO will bring this item to stakeholders for discussion in the coming months.</p>

## B) Resource Eligibility – Long Duration Energy Storage (LDES)

Stakeholders were generally supportive of the IESO’s proposal to include compressed air energy storage and pumped storage technologies under the list of eligible LDES technologies. Stakeholders were also supportive of the IESO’s proposal to work with stakeholders to expand the list of eligible technologies and provided feedback for additional technologies that should be considered.

Feedback / Common Themes	IESO Response
<p><b>The IESO should clarify its definition of commercially-proven LDES technologies and consideration of Technology Readiness Level (TRL).</b></p> <p>Stakeholders indicated that it is unclear how commercially-proven LDES technologies are interpreted by the IESO and what criteria is used by the IESO to demonstrate that a technology is commercially-proven.</p> <p>Some stakeholders indicated that commercially-proven LDES technologies should be those with a TRL of 8 or higher and cited use of TRLs in the IESO's Pathways to Decarbonization report and the EPRI P221 program.</p>	<p>The IESO will establish formal definitions related to eligible technology types as part of RFP and Contract development. The IESO is considering using the technology readiness level definitions as found in the Government of Canada's <a href="#">TRL Assessment Tool</a> as a baseline.</p> <p>For instance, the Government of Canada defines Commercially Available technologies as those where:</p> <p><i>Technology development is complete. The technology is openly available in the marketplace and/or has been sold in its current state of service offering for non-testing or development purposes.</i></p> <p>The IESO will also consider a technology's expected ability to meet system needs reliably over the term of the contract when making its determination on which technologies will be eligible to participate in the LLT RFP.</p>
<p><b>Liquid Air Energy Storage technologies should be eligible for the LLT RFP.</b></p> <p>Some stakeholders indicated that development timelines for liquid air energy storage technologies may be aligned with the required development timelines proposed for the LLT RFP. One stakeholder indicated that development timelines can be up to six (6) years when considering the cumulative time taken for planning, permitting, financing and construction.</p>	<p>The IESO appreciates this feedback and is considering allowing the participation of liquid air energy storage technologies under the LLT RFP.</p>

Feedback / Common Themes	IESO Response
<p><b>Compressed Gas Energy Storage technologies should be eligible for the LLT RFP.</b></p> <p>One stakeholder indicated that the inclusion of compressed gas energy storage technologies (that use gases other than air) would broaden participation.</p>	<p>As presented during the <a href="#">June 5 2025, LLT RFP Engagement Webinar</a>, the IESO is proposing that compressed air energy storage technologies will be eligible to participate in the procurement.</p> <p>The IESO will consider whether eligibility should be expanded to include all compressed gas energy storage technologies, including those that use gases other than air.</p>
<p><b>The IESO should provide opportunities beyond the grid innovation fund for emerging LDES technologies.</b></p> <p>One stakeholder indicated that developers of emerging LDES systems require a clear, stable, long-term contracting opportunity in order to be successfully deployed.</p>	<p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO is currently planning to conduct research on emerging LDES technologies and will also be evaluating the benefits that longer duration storage technologies can provide to the grid.</p> <p>Results of this research will inform opportunities that may arise for emerging LDES technologies in future procurements.</p>
<p><b>The IESO should consider extending eligibility to hydrogen based storage projects.</b></p> <p>One stakeholder indicated that these resources have a long lead time for development and are similar in design to biomass facilities currently operating on the IESO-controlled grid, as they can offer inexpensive capacity and can provide injections over a long period of time.</p>	<p>At this time the IESO is not considering extending eligibility under the LLT RFP to hydrogen-based energy storage projects.</p> <p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO is currently evaluating the benefits that hydrogen storage can provide to the electricity system through the Hydrogen Innovation Fund, including the various forms of production and re-electrification of hydrogen.</p> <p>Proponents with hydrogen-based projects are encouraged to contact the Hydrogen Innovation Fund (<a href="mailto:hydrogeninnovationfund@ieso.ca">hydrogeninnovationfund@ieso.ca</a>).</p>

Feedback / Common Themes	IESO Response
<p><b>The IESO should establish a separate procurement specific to LDES technologies and multi-day energy storage.</b></p> <p>One stakeholder indicated that it is crucial for the IESO to first establish clear commercial opportunities for LDES technologies so that developers can begin to invest in bringing new technologies to market.</p>	<p>The LLT RFP will include an energy stream and a capacity stream, with the capacity stream focused on LDES technologies.</p> <p>While there are no separate opportunities currently contemplated for multi-day energy storage resources, these resources can participate in the LLT RFP provided that they are an eligible resource type and can meet all performance obligations. Multi-day energy storage resources should also consider opportunities to participate in the LT2 RFP, which is technology agnostic.</p>
<p><b>The IESO should consider bifurcating the LLT RFP into one stream for inverter-based technologies and another stream for non-inverter based technologies.</b></p> <p>One stakeholder indicated that such a bifurcation would facilitate greater competition as it would allow for the evaluation of similar technologies with similar development lead-times under each stream.</p>	<p>At this time the IESO is not considering bifurcation of the LLT RFP into an inverter-based technology stream and a non-inverter based technology stream.</p> <p>Similar to the LT2 RFP, the LLT RFP will have an energy stream and a capacity stream, which will allow similar technology types to be evaluated against one another based on their ability to meet defined system needs.</p>

## C) Storage Duration and Rated Criteria

Stakeholders provided mixed feedback on the proposed minimum duration requirement under the LLT capacity stream. While some supported the IESO's proposed minimum duration requirement of 8 hours, others indicated that the requirement should be increased. Specific feedback is provided below.

Feedback / Common Themes	IESO Response
<p><b>The IESO should consider increasing the minimum duration requirement to 10 or 12 hours.</b></p> <p>Two stakeholders indicated that such an increase would provide further reliability to the system and cited examples in other jurisdictions where minimum durations were increased to similar levels to provide operators with greater system flexibility.</p>	<p>The minimum duration requirement for resources participating in the LLT RFP is still under consideration; the IESO will present its proposal in a future stakeholder engagement.</p> <p>The IESO expects LDES resources that participate in the LLT RFP to be in the 8-12 hour duration range, which can realize the most reliability benefits at this time. Further study is required to evaluate the benefits of longer durations, to ensure strategic alignment of storage characteristics with identified system needs.</p>

Feedback / Common Themes	IESO Response
<p><b>The IESO should consider a “price incentive” for projects led by or in partnership with Indigenous Communities, in addition to rated criteria points.</b></p>	<p>Whether incentives related to Indigenous Community Participation are included in IESO procurements is informed by government policy direction. The incentives included in the LT2 RFP were developed working with the Ministry of Energy and Mines and a similar approach is expected under the LLT RFP (i.e., rated criteria points). The IESO expects to receive formal policy direction on this and other matters in advance of launching the LLT RFP.</p> <p>Indigenous communities are playing a pivotal role in new procurement opportunities, transmission development and energy infrastructure investments that support the increasing energy needs of the province. The <a href="#"><u>Indigenous Energy Support Program (IESP)</u></a> promotes broad equitable participation in Ontario’s energy sector by Indigenous communities and organizations, by supporting capacity building through flexible funding opportunities, including community energy planning and energy infrastructure development, as well as the building of energy knowledge and awareness, and skills related to energy projects.</p>

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<p><b>The 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 RTEs.</b></p> <p>One stakeholder indicated that the current 80% RTE threshold under the LT2 Qualifying Hours fails to account for other technology types and should be lowered to 50% to allow maximum storage technology participation.</p>	<p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO will review the Must-Offer Obligations, including Qualifying Hours, under the LLT RFP in conjunction with upcoming market enhancements being considered under the IESO's Enabling Resources Program (ERP), to evaluate if changes are needed to better enable LDES technology types with lower round-trip efficiencies relative to other energy storage technologies.</p>
<p><b>The IESO should consider incentivizing technologies that also provide ancillary services such as voltage support and black-start ability.</b></p> <p>One stakeholder indicated that such technologies should be considered as they can help support system reliability by providing necessary insurance against unforeseen weather events and transmission outages.</p>	<p>Thank you for your feedback. Technical rated criteria that will apply under the LLT RFP are still under consideration.</p> <p>Please note that under the LT2 Contract, projects may offer Related Products such as Operating Reserve and Ancillary Services into the market opportunities that exist, which may result in additional revenue streams for the Proponent. The IESO expects that a similar provision would apply under the LLT RFP.</p>
<p><b>The LLT RFP should not use locational rated criteria, such as rated criteria for Proposals located in Northern regions or located outside of Prime Agricultural Areas.</b></p> <p>One stakeholder indicated that many technologies expected to participate in the LLT RFP are restricted in their project siting ability as they are not able to relocate easily due to their fuel sources being highly location specific. As a result, locational rated criteria would not be fair to technologies that are not able to relocate.</p>	<p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the inclusion of rated criteria related to locational considerations will be reflective of policy decisions made by the Ministry of Energy and Mines that are issued to the IESO in the form of a Directive specific to the LLT RFP.</p> <p>The IESO has shared this stakeholder feedback with the Minister in its LLT RFP Report Back.</p>



## C) RFP and Contract Design Considerations

Feedback / Common Themes	IESO Response
<p><b>The IESO should allow for a more flexible Proposal Security mechanism to promote participation from early-stage projects, including refundability of deposits under certain circumstances.</b></p> <p>Some stakeholders indicated that other jurisdictions have low Proposal Security requirements and then higher Completion and Performance Security requirements, citing recent procurements in NY and Australia as examples.</p> <p>One stakeholder suggested that the IESO re-structure its \$35,000/MW Proposal Security requirement so that only 10% of the total Security requirement would be posted at the time of Proposal submission, 10% posted at the time of Contract Award, 30% posted 12 months after contract award and 50% posted 24 months after contract award.</p>	<p>The IESO understands the challenge facing developers and is proposing a staged approach to the provision of security under the LLT RFP. As indicated at the <a href="#">June 5 2025, LLT RFP Engagement Webinar</a>, under this approach Proponents would be required to provide Proposal Security in the amount of \$20,000/MW (which is lower than the amount required under the LT2 RFP). Should a Proponent be successful in obtaining an LLT Contract, this will be converted into Completion and Performance Security and will increase to \$35,000/MW at a pre-defined milestone during the pre-commercial operation period. Once the facility reaches commercial operation, the security amount will reduce to \$20,000/MW for the remainder of the term.</p> <p>Under the LT2 RFP, Proposal Security is returned only if the Proponent does not pass Stage 1 to 5 of evaluation. There are also provisions in the Contract under which Completion and Performance Security would be returned, in certain limited circumstances. It is expected that similar provisions would apply under the LLT RFP.</p>

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<p><b>The IESO should align Performance Security requirements under the LLT RFP with those under other initiatives, such as the IESO’s Hydroelectric Contract Initiative (HCI) and Small Hydro Program (SHP).</b></p> <p>One stakeholder indicated that Performance Security requirements should be the same as those in IESO HCI and SHP contracts, where Performance Security is not required unless there is “a contiguous 6-month period that is greater than 75% of the Contract Price”.</p>	<p>The LLT RFP is a reliability-based procurement, intended to secure incremental energy and capacity that will contribute to system needs over a 40-year term. As such, the Performance Security requirements will be structured differently than under initiatives such as HCI and SHP, which contract for existing facilities.</p>
<p><b>The IESO should require Suppliers to indicate their expected project development pathway by providing project schedules and project risk mitigation strategies at the time of proposal submission.</b></p> <p>One stakeholder indicated that such a requirement would support a lower Proposal Security requirement by the IESO.</p>	<p>The IESO appreciates this feedback. Given the long development timelines for projects being proposed under the LLT RFP, the IESO may request information regarding the project’s development pathway (including project schedules) to help monitor project progress throughout the pre-commercial operation period. However, the IESO is not considering tying the provision of this information to lower Proposal Security requirements.</p>

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<p><b>The IESO should provide additional clarity on the deliverability process for the LLT RFP as well as when deliverability guidance will be provided.</b></p> <p>Some stakeholders indicated that deliverability consultations between the IESO and Proponents may be challenging since transmission conditions may change before LLT contracts are executed.</p> <p>One stakeholder indicated that new LT projects may be selected and/or new transmission may be built by the time LLT contracts are executed.</p> <p>Another stakeholder indicated that deliverability studies should account for any required network upgrades that are needed to support LDES technologies.</p>	<p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO is considering the outcomes of other generation procurements, such as the LT2 RFP, when developing the deliverability process for the LLT RFP and will be providing additional clarity on this in the coming months.</p> <p>In addition to deliverability guidance, the IESO is considering offering a project specific consultation (or assessment) as part of the LLT RFP process, prior to proposal submission.</p> <p>Stakeholders are encouraged to continue participating in Bulk Planning engagements to share project information/details as early as possible so these can be considered in assessments for future network enhancements, where appropriate.</p>
<p><b>The LLT RFP should require all Proponents to rescind any open Connection Impact Assessments (CIAs) that they may have.</b></p>	<p>For distribution connected projects under the LT2 RFP, Proponents must rescind any open CIA's that they may have prior to proposal submission. The IESO anticipates that a similar requirement will apply under the LLT RFP.</p>

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<p><b>For proposed long-term outages under the LLT Contract, the IESO should consider that the maintenance duration of a long-term outage could vary depending on technology type and specific maintenance activities.</b></p> <p><b>The IESO should consider allowing a customized approach to long term outages for mechanical technologies under the LLT Contract by allowing for multiple shorter-term outages which do not exceed the term of a long-term outage.</b></p>	<p>The IESO is currently considering an approach to provide Suppliers with the ability to take one long-term outage for major maintenance activities, in the second half of the contract term. The IESO understands that the duration required for long term outages will depend on the technology type and maintenance activities and is looking for further details to understand the nature of maintenance activities and the maximum length of outage that may be required.</p> <p>Shorter duration Planned Outages are permitted under the LT2 Contract. It is expected that this provision will continue to apply for long lead time resources.</p>
<p><b>The IESO should consider allowing Suppliers to take a long-term outage for the purposes of facility redevelopments, expansions or upgrades.</b></p>	<p>The IESO is not considering an approach under which Suppliers will be eligible to take a long-term outage for purposes other than major maintenance activities during the contract term.</p> <p>The IESO is still exploring whether redevelopments will be eligible to participate in the LLT RFP. If these resources are eligible, any redevelopment work would be required to be completed prior to the Commercial Operation Date.</p>

Feedback / Common Themes	IESO Response
<p><b>The IESO should amend the Supplier Event of Default language used under the LT2 Contract by expanding the three (3) year period over which non-performance is evaluated to five (5) years.</b></p>	<p>At this time, the IESO is not contemplating a change to the period over which non-performance is evaluated.</p> <p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO is currently considering alignment of non-performance charges for energy contracts under the LLT RFP with those under the LT2(e-1) RFP, which calculate non-performance charges using a 3-year rolling average. Such a period allows for effective accounting of anomalies that may impact production, such as irregular weather patterns.</p>
<p><b>The LLT Contract should implement pre-COD indexing of the contract price in the same manner as Exhibit J of the LT2 Contract.</b></p> <p>One stakeholder indicated that such contract price escalation terms would help address the risk of supply chain inflation between the Proposal Submission Deadline and the Commercial Operation Date.</p> <p><b>The IESO should provide 100% indexing from the contract date to COD/MCOD and then provide 60% indexing from COD until the contract end date.</b></p> <p>One stakeholder indicated that such escalation terms would align with the capital and operational expenditure that would occur over the operational lifetime of a long lead-time asset.</p>	<p>The IESO appreciates this feedback. As communicated in the <a href="#">June 5 2025, LLT RFP Engagement Webinar</a>, the IESO is still determining the contract price escalation that will be applied during the contract term for long lead-time projects, which may be different than the escalation mechanisms that apply under the LT2 RFP. The IESO will engage on this item in the coming months.</p> <p>The IESO notes that indexing was included in the LT2 RFP for window 1 specifically to address inflationary risks created by the current trade and political climate. Consideration of whether to include similar provisions in the LLT RFP will, in part, be based on whether those conditions continue to exist.</p>

Feedback / Common Themes	IESO Response
<p><b>The LLT contract should include risk-management provisions for tariffs similar to those included in the LT2(e-1) and LT2(c-1) Contracts.</b></p>	<p>The IESO is still determining what risk management provisions for tariffs, if any, will be included in the contract for the LLT RFP and will be informing its decision based on the tariff risk that exists closer to the formal launch of the LLT RFP.</p>
<p><b>The IESO should provide early operation incentives for resources that are able to achieve commercial operation in advance to the 8-year development timelines</b></p>	<p>As indicated in the <a href="#">LLT RFP June 13, 2025 IESO Response to Stakeholder Feedback</a>, the IESO is not considering early operation incentives for the LLT RFP as technologies participating in the LLT RFP may have varying lead times and early operation incentives can provide an unfair advantage to projects with shorter lead times. In addition, there are other procurement mechanisms (e.g., LT, MT) that can be used to secure resources required in advance of the MCOD for long lead time projects.</p> <p>The IESO is considering allowing long lead time projects to reach commercial operation earlier provided there are no deliverability limitations. This would result in an early start to the contract term.</p>

## D) General

Feedback / Common Themes	IESO Response
<p><b>The IESO should expand the LLT RFP capacity stream procurement target to 1000MW as it would send an appropriate signal about the commitment to LDES technologies.</b></p> <p>Stakeholders indicated that expanding the target would increase participation and encourage participation from larger-scale resources which could decrease overall costs. Some stakeholders indicated that the IESO would still be able to maintain the flexibility to under-procure if conditions warranted it.</p>	<p>Procurement targets are still under consideration and will be finalized closer to the formal launch of the LLT RFP by considering competition, system needs, and other market insights.</p>
<p><b>The IESO should provide clarity for when the LLT RFP will be formally launched.</b></p>	<p>The IESO understands the need for Proponents to have clarity around when the LLT RFP will be launched. The IESO expects to share more information regarding procurement timelines in the fall.</p>
<p><b>The IESO should extend LLT RFP eligibility to biomass projects.</b></p>	<p>The LLT RFP will be limited to participation of hydro and certain long lead time LDES projects. The IESO encourages Proponents with biomass projects to consider opportunities available under the LT2 RFP.</p>