

Feedback Form

Long-Lead Time RFP – November 19, 2025

Feedback Provided by:

Name: Linda Heron

Title: Chair

Organization: Ontario Rivers Alliance

Email: [REDACTED]

Date: 3 December 2025

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

- ☐ **NO There is confidential information, do not post**
☒ **YES Comfortable to publish to the IESO web page**

Following the November 19th Long Lead-Time RFP 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 RFP engagement webpage](#).

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 December 3, 2025.

LLT Energy RFP and Contract

LLT(e) RFP – Resource Eligibility

Do you have feedback on the proposed resource eligibility requirements?

ORA:

The proposed eligibility requirements for hydroelectric resources are fundamentally misaligned with Ontario's climate realities, freshwater vulnerabilities, and the scientific evidence on reservoir emissions. Climate-driven warming, drought—deluge cycles, thermal exceedances, and declining summer flows further worsen their impacts and are documented extensively in Environment and Climate Change Canada's Synthesis of Freshwater Science in Canada. It provides federal scientific confirmation that Canadian freshwater systems are increasingly threatened by warming temperatures, altered hydrology, extreme precipitation patterns, habitat fragmentation and biodiversity declines.¹ Exactly the pressures that make new hydropower dams and reservoirs even more damaging.

In addition, the Ontario Provincial Climate Change Impact Assessment and Technical Report Appendices² **must be incorporated into the Minister of Energy and IESO's decision-making regarding hydropower.** It is crucial that Ontario's electricity planning is anchored in **climate reality, not supply-driven industrial aspirations** and untenable dreams of becoming an "Energy Superpower", on the backs of ratepayers and the environment, no less.

Opening the LLT RFP to new-build hydroelectric facilities ≥ 1 MW invites the proliferation of **small, shallow, high-GHG reservoirs** that degrade water quality, warm riverine ecosystems, fragment habitats, intensify cumulative effects, and reduce watershed resilience. The methane literature is unequivocal: even very small reservoirs emit disproportionately high levels of methane. *BioScience's* global synthesis shows that reservoirs are a major, under-recognized source of emissions, while Lessmann et al. (2023) demonstrate that everyday operations, such as drawdowns or flooding, create methane spikes³. Swiss reservoir studies confirm small, shallow impoundments—like those in Ontario—produce some of the **highest methane fluxes measured internationally**.⁴ Numerous other studies indicate that GHG emissions, primarily methane and carbon dioxide, are generated from all man-made reservoirs for as long as the dam is in place, and they are certainly not "*clean*" or "*non-emitting*."

The Draft LLT(e) RFP is internally inconsistent and misleading regarding minimum hydroelectric project size. The RFP explicitly states that any new hydroelectric project ≥ 1 MW is eligible for LLT procurement, yet it also includes operational requirements and regulatory-service expectations that only facilities ≥ 20 MW can realistically meet. The public presentation emphasized large "commercial-scale" long-lead assets, but the legal text continues to invite a proliferation of >1 MW projects on smaller, climate-stressed rivers — the very **hydro projects that produce the highest methane emissions, the greatest cumulative impacts, and the least system value.**

This contradiction must be resolved. If the IESO is unwilling to exclude conventional dam-and-reservoir hydro entirely, then at a minimum, the eligibility threshold for any new dam-based project must be aligned with the IESO’s own 20 MW operational criteria. The **current 1 MW floor is indefensible** from both climate and grid-planning perspectives.

Small hydro, under 20 MW, offers minimal accredited capacity value and cannot materially contribute to reliability needs, making their ecological impacts wholly unjustifiable.

IESO: Hydro’s Inability to Provide On-Demand Capacity

The IESO’s own bulk-system planning materials make it clear that hydroelectric is not a reliable, on-demand capacity resource. In multiple analyses in 2024 and 2025, the IESO repeatedly describes hydro units as **“energy-limited”** resources whose **“dependable output varies over the course of a day,”** noting that hydro **“cannot sustain continuous output”** and **“typically peaks coincident with Ontario system peak hours (evenings).”**⁵ Additional system-planning reports underscore that **“Installed Capacity North of Sudbury is declining and variable/ limited in energy”,** and **“unable to run continuously”** with **“low overnight hydro generation”**, directly attributed to energy limitations.⁶ Even the IESO’s transmission-need assessments clearly state that **“hydro facilities in the North are dispatched to support Ontario system peaks while reducing output overnight to conserve water and make it available for the following day”**.⁷ This reaffirms that these units cycle their limited water supply rather than operate as a true dispatchable asset.

In practice, this means hydro operators must ration, conserve, and redistribute constrained water supplies throughout the day—often storing or refilling headponds during lower-value hours—which prevents hydroelectric facilities from providing continuous, on-demand generation. The IESO’s own characterizations make it clear that hydropower cannot deliver firm capacity, particularly under intensifying climate-driven flow volatility.

These self-identified limitations demand that the Minister of Energy and the IESO ground procurement decisions in the Province’s **2023 Ontario Climate Change Impact Assessment**, which projects severe warming, declining summer flows, and escalating drought–deluge cycles. Proceeding with a proliferation of new hydroelectric dams under these conditions would recklessly jeopardize river health, push already over-stressed aquatic ecosystems past their limits, and saddle the province with energy assets that **cannot** perform the on-demand role that is needed.

Put plainly: building new hydropower on Ontario rivers in this warming climate with already declining water availability is not just environmentally irresponsible—it is **utterly indefensible energy planning**.

Environmentally Sustainable Dam-Free Kinetic Hydropower Technologies:

Ontario should direct innovation and procurement toward modern, dam-free hydrokinetic technologies—such as [Waterotor Energy Technologies](#), [ORPC's RivGen® System](#), [Sustainable Brands-TidalWatt](#), [Turbulent](#), and similar **dam-free**, fish-friendly, environmentally sustainable next-generation systems. These designs generate electricity from flowing water without dams, reservoirs, flooding, fish passage barriers, or methane emissions.

These technologies are scalable, fast to deploy, economical, modular, and environmentally sustainable. Their emergence makes it increasingly indefensible to continue developing antiquated, high-impact reservoir-based hydroelectric projects that degrade ecosystems, fragment rivers, and worsen climate impacts. Ontario must ban new hydropower dams and reservoirs and explicitly prioritize dam-free alternatives as part of a modern, environmentally sustainable, and climate-resilient electricity strategy.

It is also important to emphasize that **dam-free hydrokinetic technologies** are fundamentally different from dam-and-reservoir projects. These modular, low-impact systems do not create impoundments, alter flow regimes, fragment habitat, or generate methane. They are suitable for small-scale, distributed applications where ecological integrity can be maintained.

The **minimum size threshold recommended by ORA, therefore, applies strictly to conventional dam-and-reservoir hydropower** and should not be misinterpreted as a barrier to environmentally responsible dam-free technologies.

Ontario requires an energy planning framework that strengthens climate resilience, protects freshwater ecosystems, respects Indigenous rights, and minimizes ratepayer exposure. The LLT RFP, as currently designed, does not achieve these goals.

ORA Recommendations:

- **Exclude all new dam and reservoir-based hydroelectric projects** from eligibility. Ontario's rivers must be resilient to a warming climate and cannot absorb additional ecological stress from new dams and reservoirs.
- **Include environmentally sustainable and scalable dam-free Kinetic Hydropower Technologies**, as noted above, **and similar next-generation, dam-free, fish-friendly systems**.

LLT(e) RFP – Team Member Experience

Do you have feedback on the proposed Team Member Experience requirements?

ORA:

A developer should have built at least two hydropower projects. Hydroelectric with **reservoir technology** is increasingly unreliable, climate-vulnerable, and high-emitting; therefore, a proponent's experience is critical to resolving the complex planning and development criteria

that are fundamental to an environmentally sustainable, climate-resilient operation in Ontario's rapidly warming and increasingly hostile watersheds.

ORA Recommendation:

- Extensive proponent experience is essential, so the IESO should require experience in planning, developing, financing, and operating at least 2 hydropower projects within Canada and the US, no more than 15 years prior to proposal submission.
- Team experience requirements should not be used to justify or enable a technology that is fundamentally misaligned with climate science.

LLT(e) RFP – Access Rights

Do you have feedback to help inform the requirements related to access rights for waterpower projects?

ORA:

The presentation treats hydroelectric access rights as a land-tenure issue, but hydropower does not merely occupy land—it **alters entire river systems**. Hydro projects have profound implications for flow, sediment transport, thermal regimes, fish passage, downstream ecosystem function, Indigenous cultural use, and cumulative impacts across the watershed.

Department of Fisheries and Oceans' own cumulative effects science (Murray et al. 2020; Cormier et al. 2022) confirms that dispersed, repeated alterations—even small ones—can generate major, system-wide impacts. The LLT access-rights framework does not reflect this reality.

In addition, the Draft LLT(e) RFP incorrectly restricts Indigenous consent requirements only to projects located on “Indigenous Lands” (i.e., Reserve lands). This definition ignores Aboriginal and Treaty rights across the full extent of traditional territories and ancestral lands and is inconsistent with section 35 of the Constitution Act, the Honour of the Crown, and Canada's commitments under UNDRIP.

New hydropower can affect Indigenous rights and interests far downstream of a project footprint – including fish populations, water quality, quantity and temperature, sediment transport, culturally significant sites, and river access. These impacts occur across watersheds and are not confined to Reserve boundaries.

ORA Recommendation:

- **No LLT(e) Contract will be awarded without documented Free, Prior, and Informed Consent (FPIC) from all affected Indigenous Nations whose territories or rights may be impacted, regardless of whether the project is located on Reserve lands.**

- FPIC must be a project-wide requirement, not a narrow land-tenure question. Ontario must not authorize new dams without a full understanding of their ecological and rights-based implications.
- Ontario cannot treat FPIC as a permitting-stage issue. FPIC must be a pre-contract eligibility requirement or the Crown risks making commitments that cannot be lawfully implemented.

Draft Documents

Do you have feedback to share on the [draft LLT\(e\) RFP and Contract](#)?

Note: Stakeholders are welcome to attach a separate document that contains comments on the draft documents. Please indicate if separate documents are confidential.

ORA:

The proposed **40-year contract term**, combined with hydro's long construction timelines and climate-driven flow uncertainty, exposes Ontario to unacceptable financial, ecological, and climate risks.

Hydropower is no longer a reliable or low-carbon resource. Reservoir-based facilities lock in methane emissions, degrade river systems, and accumulate ecological harm for 80–120+ years—well beyond the 40-year PPA. Meanwhile, dam-free kinetic energy, solar, wind, battery storage, and conservation are cheaper, deploy far faster (1–3 years), and carry no aquatic impacts.

The LLT contract guarantees revenue to hydro facilities even though the IESO acknowledges it cannot reliably forecast hydro output under changing climate conditions. This creates major ratepayer risk.

Locking ratepayers into volatile hydropower output under worsening drought cycles is fiscally reckless and contradicts the IESO's mandate to secure affordable, reliable power.

ORA Recommendation:

- Reject 40-year contracts for hydroelectric projects, which effectively lock Ontario into century-scale ecological degradation and GHG liabilities.
- Provide 20-year contracts for hydropower projects.
- Remove reservoir-based hydro from the LLT(e) RFP and prioritize **dam-free kinetic hydropower, wind, solar, storage, and conservation**—all proven, fast-to-deploy, and cost-effective.

Climate-Risk & Cumulative-Effects

The Draft LLT(e) RFP and Contract contain **no requirement for climate-risk assessment or watershed-scale cumulative-effects analysis prior to contract award**. This omission is

incompatible with Ontario's provincial climate projections, with DFO's cumulative-effects science, and with the growing body of freshwater research showing that climate change is intensifying thermal stress, flow instability, extreme drought and rain cycles, and habitat fragmentation.

Cumulative impacts and climate vulnerability must be key considerations in determining whether a hydroelectric project, especially a new dam, is environmentally or operationally viable. Yet the RFP treats these issues as permitting-stage afterthoughts rather than core eligibility criteria.

ORA Recommendation:

- That **all hydroelectric proposals be required, as a pre-contract condition, to provide a:**
 - **A full watershed-scale cumulative effects assessment.**
 - **Climate-risk analysis using the Ontario Climate Impact Assessment.**
 - **Transparent public disclosure of both.** These must be foundational, not optional.

Additional Design Considerations

Early In-Service Provisions

Do you have feedback related to the proposed early in-service provisions?

ORA:

Early in-service options are irrelevant for conventional hydropower with reservoirs, which often go over schedule, cost twice as much as estimated, and due to their scale and complexity, federal and provincial reviews and permitting, Crown assessments, Indigenous consultation, geotechnical design, and water management approvals can take a while.

In contrast, **dam-free kinetic hydropower, wind, solar, and battery storage routinely enter service years ahead of schedule**, delivering rapid reliability benefits without ecological costs.

General Comments/Feedback

Do you have additional feedback to share with the IESO?

ORA:

Ontario rivers are already under severe climate stress.

The effects of climate change on Ontario rivers are already apparent, causing severe warming, lower summer flows, extreme rainfall and drought cycles, increased sediment pulses, blue-green algae blooms, biodiversity decline, as well as urban pollution from wastewater effluent and agricultural runoff. Dams and their reservoirs amplify these conditions and threaten aquatic species. Adding new dams to rivers already compromised turbocharges every single aspect of river vulnerability. Then there is the methane factor.

A proliferation of new dams on smaller rivers with low generation capacity will only exacerbate the heavy lifting Ontario rivers are already doing. Larger rivers have greater capacity to buffer some of the effects of climate change and these other numerous stressors.

Other clean, fast, cost-effective alternatives already exist.

Solar, wind, battery storage, and conservation can deliver the reliability Ontario needs without sacrificing river health at much lower cost, are quick to deploy, and are highly scalable clean-energy technologies! While investment continues to flow into hydropower with its long lead times, high deployment costs, significant methane emissions, declining water availability and ecologically damaging effects.

Henvey Inlet First Nation's wind installation in northern Ontario is a stellar example to follow for smart, lucrative and effective projects, especially in remote areas with energy storage systems!

The LLT RFP must reflect this modern energy reality.

If it does not, it will lock Ontario into decades of unnecessary methane and carbon emissions, reduce water quality and quantity, result in significant ecological loss, and lead to costly stranded assets.

Key concerns:

- Reservoir-based hydro is a **significant methane source**, and a threat to healthy rivers and sustainable migratory fish populations.
- IESO's own Seasonal Outlook and APO reliability assessments acknowledge **declining hydro reliability under climate change**—making new reservoir-based projects a poor fit for a dependable resource category.
- Dams worsen climate vulnerabilities in rivers already experiencing warming, flow instability, and biodiversity decline.
- Hydropower is the **slowest to build and most expensive** option compared to dam-free kinetic alternatives, wind, solar, battery storage, and conservation.
- 40-year contracts lock Ontario into long-term ecological and financial liabilities.
- Dam-free kinetic waterpower, wind, solar and storage are scalable, cheaper than hydropower, and can be deployed **10x faster**, with no emissions or aquatic degradation.

Summary of Recommendations:

1. **Exclude all dam and reservoir-based hydropower from the LLT eligibility.**
2. **Require new conventional hydropower to be 20 MW or above.**
3. Require **watershed cumulative effects, climate-risk assessments, and Indigenous FPIC** for any hydropower proposal in their traditional territory.
4. **Prioritize solar, wind, battery storage, conservation, and dam-free kinetic hydro technologies** (as noted above).
5. Reject 40-year hydropower contracts that lock Ontario into century-scale impacts.
6. Integrate the methane science (as noted above) into all future conventional hydropower procurement frameworks.
7. Modernize Ontario's electricity planning by shifting away from 20th-century dam and reservoir infrastructure toward **flexible, modular, rapidly deployable, climate-resilient energy systems, as mentioned in these comments.**
8. Ontario is way overdue in requiring fish passage and up-front dam decommissioning provisions to cover the cost of removing these stranded assets sooner than you think!

Ontario's energy future does not depend on building new dams; it depends on accelerating wind, solar, storage, conservation, and low-impact, dam-free innovations that align with climate science, Indigenous rights, and watershed resilience. The LLT(e) RFP must not reopen the door to small, shallow, methane-emitting hydro projects that degrade freshwater health and offer little grid value. We must ensure Ontario rivers are more resilient in the face of climate change, not weaken them. Ontario must move forward, not backward.

Rivers are the lifeblood of communities, ecosystems, and treaty relationships. They must not be sacrificed for new hydropower with dams and reservoirs when cleaner, faster, and more sustainable, cost-effective options already exist.

Linda Heron
Ontario Rivers Alliance

¹ *Environment and Climate Change Canada. "Synthesis of Freshwater Science in Canada, An overview toward informing discussion on prioritizing of freshwater science activities".*

² *Ontario Provincial Climate Change Impact Assessment and Technical Report Appendices.*

³ Lessmann et al. (2023). "Methane Emissions Due to Reservoir Flushing." *Biogeosciences*.
<https://bg.copernicus.org/articles/20/4057/2023/>

⁴ DelSontro, T., McGinnis, D. F., Sobek, S., Ostrovsky, I., Wehrli, B. (2010). Extreme methane emissions from a Swiss hydropower reservoir: Contribution from bubbling sediments. *Environ. Sci. Technol.* 44: 7, 2419–2425.
<https://doi.org/10.1021/es9031369>

⁵ IESO, Northern Ontario Bulk Study, Quarterly Bulk Planning Update, Nov. 20, 2024.

⁶ IESO, Quarterly Bulk Update, North of Sudbury, Eastern Ontario, and South and Central Bulk Studies, Oct. 8, 2025.

⁷ IESO, Northern Ontario Bulk Study: North-South Transmission Reinforcement Plan, Sept. 25, 2025.