



Chuck Farmer
Vice President, Planning, Conservation and Resource Adequacy
Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, ON M5H 1T1

August 22, 2022

Dear Chuck,

This submission responds to the Independent Electricity System Operator's (IESO's) August 10, 2022, webinar ("the update webinar") and presentation, *LT1 RFP, Expedited Process and Same Technology Upgrades Update*.¹

Power Advisory has coordinated this submission on behalf of a consortium of renewable generators, energy storage providers, and the Canadian Renewable Energy Association (CanREA) (the "Consortium")².

The Consortium thanks IESO for conducting the update webinar. It is important to consult with potential Long-Term T1 Request for Proposals (LT1 RFP) proponents on a frequent and regular basis to promote the exchange of information and ideas related to the LT1 RFP. We hope that IESO will continue to conduct such engagement sessions in the future.

Rated Criteria

The Consortium offers the following points for consideration.

We look forward to clarity on how economic interest is defined and hope that it is defined in a similar manner to the Feed-in Tariff (FIT) and Large Renewable Procurement (LRP) contracts. Project developers have had prior experience negotiating agreements with Indigenous partners using the FIT and LRP definitions for economic interest, and all parties are familiar with these definitions. It will make it much easier to arrive at agreements if new ground in this regard does not need to be covered.

We request clarification on exactly what documentation proponents will need to provide to prove economic interest from Indigenous peoples. Without further clarity, it will be extremely difficult to

¹ See <https://www.ieso.ca/-/media/Files/IESO/Document-Library/engage/long-term-rfp/ltrfp-20220810-presentation.ashx>

²The members of the Consortium are: CanREA; Axiom Infrastructure; BluEarth Renewables; Boralex; Capstone Infrastructure; CarbonFree Technology; Connor, Clark & Lunn; Cordelio Power; EDF Renewables; EDP Renewables; Enbridge; ENGIE; Evolgen (by Brookfield Renewable); H2O Power; Kruger Energy; Liberty Power; Longyuan; NextEra Energy Canada; Pattern Energy; and wpd Canada.



conclude agreements with Indigenous peoples; therefore, IESO should accept next best arrangements (e.g., letter of intent, etc.).

Procurement Schedule

The procurement schedules are continuing to exhibit delays. Based on present experience from some Consortium members, delivery schedules for major equipment (e.g., generators, switchgear, transformers, etc.) are now considerably longer than pre COVID-19 pandemic timelines. For example, power transformer deliveries are currently being quoted in excess of 90 weeks versus 45 to 50 weeks a year ago. Unless a proponent who is planning to develop a project in response to any of IESO's RFPs orders such equipment in parallel with undertaking permitting processes (and at the risk of permitting being delayed or not approved), etc., these substantially longer delivery timelines on major equipment will make it very difficult to meet commercial operation dates (CODs) between 2025 and 2027 – even with financial incentives.

Despite these delays, IESO continues to maintain the May 1, 2025, COD, which is effectively when contract terms will begin. We support the monetary incentives for timely completion proposed by IESO (i.e., proposed COD multiplier, one-year grace period for the triggering of liquidated damages). Notwithstanding this, these measures will not necessarily accelerate project development because many development tasks, such as obtaining required permits, are out of a developer's control. We recommend that contract term commencement also be given a one-year grace period such that it aligns with the triggering of any liquidated damages obligations.

The Consortium reiterates the point we made in our August 5, 2022 submission to you about the timing of contract awards. It is essential that contracts be executed early in Q1/2023 to permit spring fieldwork and studies that will be needed to support approvals applications. Project developers need time themselves to arrange for this fieldwork and accompanying studies to be done. Failing this, an entire construction season could be lost, which will jeopardize planned in-service dates.

Contract Design

The Consortium acknowledges IESO's proposal that the Expedited Process and LT1 RFP contracts will have contract terms and conditions tailored to specific characteristics of energy storage and other generation technologies. For energy storage projects, the proposed payment mechanism whereby the capacity payment is adjusted based on the difference between the four highest-priced hours and four lowest-priced hours ("the spread") is an improvement over previous potential payment mechanisms that IESO presented to stakeholders. However, the Consortium is of the view that more analysis and work is needed to finalize the payment mechanism. Post IESO release of the draft contract, the Consortium will provide more detailed comments at that time.

For the time being, the Consortium notes that the present proposed payment mechanism assumes perfect operation for a storage project providing energy on a regular basis and we believe that the



adjustment needs to account for some degree of leeway for regular and not perfect operations. We look forward to hearing the specific details about how such a mechanism would work

The Consortium is pleased to see plans for an energy storage regulatory charge credit to be incorporated into the payment mechanism. We believe that this will place energy storage on an equal footing with other technologies and promotes competition. We look forward to the details of this this will be implemented in the draft contract.

Clarity is still needed regarding the treatment of Environment Attributes (EAs). IESO has stated that treatment of EAs may be linked to the Clean Energy Credit (CEC) registry initiative. Project developers need certainty regarding EAs for the purposes of pricing their proposed projects. If an EA/CEC can be monetized, it will benefit Ontario's electricity customers in any competitive procurement.

Deliverability Test Process and Sequencing

The Consortium was appreciative of clarifications provided by IESO regarding the Deliverability Test and IESO should finalize the Deliverability Guidance document³ as soon as possible. Project developers need to understand how this testing will be undertaken to best finalize siting location decisions and size of projects. The deadline for submitting information about Expansions and Expedited Procurement projects is in about two weeks.

As we stated in our August 5 submission, we encourage IESO to do whatever possible to enhance readiness of the Local Distribution Companies (LDCs) regarding their role to help IESO to administer Deliverability Tests. We expect that a significant number of projects will be distribution-connected and the role that LDCs will play in testing deliverability and grid connection cannot be overstated.

Same-Technology Upgrades

It was good to learn more about the planned Same-Technology Upgrades (STU) procurements. We note that minimum eight-hour duration for projects to be eligible effectively excludes most renewable projects (biomass and other biofuels excepted).

As stated within previous submissions, the Consortium strongly urges IESO to specifically consider how repowering operating renewable generation will be addressed as soon as possible. Maintenance and investment decisions are already being made for projects with contracts ending in 2029 and 2030 that will irrevocably determine the future of those projects post expiry of their contracts. Considering Ontario's future energy needs, repowering renewable generation will be very important to address this supply need.

³ <https://www.ieso.ca/-/media/Files/IESO/Document-Library/long-term-rfp/ieso-LTI-RFQ-deliverability-guidance-document.ashx>



Indexing

The Consortium welcomes IESO's openness to introduce indexing to mitigate cost inflation risks that project developers and asset owners will be confronting. We recommend that all indexing be done using publicly available third-party indices and flexibility for successful project proponents to choose applicable indices commensurate with their project technology.

We note that Hydro-Québec (HQ) provided similar indexing for some of its wind energy contracts about a decade ago. For example, the HQ contract for Parc Éolien De L'Érable⁴ provided indexing using Statistics Canada (StatsCan) published indices for concrete, steel, and copper, with the Consumer Price Index (CPI) being used to index other costs. We note that StatsCan did once publish an Electric Utility Construction Price Index; however, its calculation and publication was suspended in 2014.

Perhaps the single most important index will be one for battery raw materials. CPI will not be an appropriate index to use for battery raw materials because of its composition. StatsCan does not produce a battery raw material price index, but one could perhaps be constructed by aggregating price data from StatsCan for lithium, copper, nickel, cobalt, Cadmium, etc.⁵ The StatsCan data is based on the dollar value of shipments and not pricing, per se. More focused price data is available from S&P Global⁶, and it, too, could provide the input data for a battery raw material price index. A lithium battery raw material price index is available from Benchmark Minerals⁷ as a subscription service.

The Consortium thanks IESO for on-going stakeholder engagement meetings regarding LT RFP 1 and other related stakeholder engagement meetings relating to supply procurements and resource adequacy.

We will be pleased to meet with IESO about this submission at a mutually convenient time.

⁴ http://www.regie-energie.qc.ca/audiences/3676-08/Requete_3676-08/B-1_HQD-01Doc01-02_EolienDeLErable_3676_29juil08.pdf

⁵ <https://www150.statcan.gc.ca/t1/tbl1/en/cv.action?pid=1610001901>

⁶ <https://www.spglobal.com/commodityinsights/en/market-insights/topics/battery-metals>

⁷ <https://www.benchmarkminerals.com/lithium-ion-battery-raw-material-index/#:-:text=The%20Lithium%20ion%20Battery%20Raw%20Material%20Price%20Index,chemistries%20on%20a%20per%20kilowatt%20hour%20%28kWh%29%20basis>



Sincerely,

A handwritten signature in black ink, appearing to read "J. Chee-Aloy", enclosed in a thin black rectangular border.

Jason Chee-Aloy
Managing Director
Power Advisory

cc:

Barbara Ellard (IESO)
Brandy Giannetta (Canadian Renewable Energy Association)
Elio Gatto (Axiom Infrastructure)
Roslyn McMann (BluEarth Renewables)
Adam Rosso (Boralex)
David Oxtoby (CarbonFree Technology)
Patrick Leitch (Capstone Infrastructure)
Jason Woods (Connor, Clark & Lunn)
Paul Rapp (Cordelio Power)
David Thornton (EDF Renewables)
Nathan Roscoe (EDP Renewables)
Lenin Vadlamudi (Enbridge)
Michelle Dueitt (ENGIE)
Julien Wu (Evolugen by Brookfield Renewable)
Stephen Somerville (H2O Power)
JJ Davis (Kruger Energy)
Deborah Langelaan (Liberty Power)
Jeff Hammond (Longyuan)
Cheryl Dietrich (NextEra Energy)
Rob Campbell (Pattern Energy)
Ian MacRae (wpc Canada)