

Feedback Form

Long-Term 2 (LT2) RFP – February 15, 2024

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To promote transparency, feedback submitted will be posted on the Long-Term RFP engagement page unless otherwise requested by the sender. If you wish to provide confidential feedback, please mark "Confidential".

Following the LT2 RFP February 1, 2024, engagement webinar, the Independent Electricity System Operator (IESO) is seeking feedback from stakeholders on specific items discussed during the webinar. The webinar presentation and recording can be accessed from the [engagement web page](#).

Please submit feedback to engagement@ieso.ca by February 15, 2024.

Revenue Model

Do you have any additional comments regarding the revenue model, particularly with regards to the following: Deeming energy market revenues based on real-time locational marginal prices (LMP), as opposed to the IESO's recommendation of basing this on the day-ahead LMP.

(Slides 19-21)

- The optionality of using either a simple average day-ahead price or weighted average LMP, with the latter including hours where the resource was scheduled day-ahead in a given month. (Slides 22-23)
- Including monthly production factors that on average equate to the annual production factor, in order to further account for seasonality. (Slides 24-26)

Evolugen by Brookfield Renewable appreciates the opportunity to provide comments.

We welcome the improvements made by the IESO to the enhanced PPA model (ePPA) as outlined in the two bullets to the left of this cell.

A successful LT2-RFP would require a revenue model that accounts for three specific risks. If all three risks were covered in a satisfactory manner, we could support a revised ePPA revenue model:

- First, the curtailment risk needs to be addressed. After extensive modelling using the ePPA to produce different outcomes, we are not 100% convinced that this revenue model adequately protects facilities against curtailments. Proponents cannot predict how grid conditions would evolve over the life of the contract (e.g., refurbished and new nuclear facilities resulting in Surplus Baseload Generation, solar penetration introducing a duck curve, or electric vehicles charging at night flattening and shifting on/off peaks...), nor can we control how frequently and how much the IESO would curtail our power output. In fact, the curtailment risk was addressed in previous contracts by the Foregone Energy clause, which was a critical consideration for contract holders. At this stage, we view the ePPA's most important advantage as its potential ability to protect against the curtailment risk. In this context, we urge the IESO to further demonstrate—with scenarios, modeling, and draft contract language—this key advantage to industry.
- Second, the DAM-RT market risk needs to be mitigated. The proposed optionality to peg deemed revenue to either a simple average day-ahead price or a weighted average LMP would partially mitigate this risk. However, we note that the LT2-RFP will procure energy-resources that are likely to be intermittent, and their non-dispatchable nature makes this market risk especially unmanageable. While the make-whole mechanism—if DAM offers followed the IESO's forecasts—confers some

protection, the DAM-RT market risk remains a significant obstacle for intermittent energy-resources to secure low-cost financing. We recommend the IESO to offer two options. First, an asset (e.g., wind) can be deemed on its RT delivery as long as its DAM offers followed the IESO's forecast. Second, an asset (e.g., hydro), with no IESO forecast available, can be deemed in the DAM. In both cases, participants would still be incentivized to participate in the DAM, yet the DAM vs RT market risk would be minimized. In the latter case, projects with the ability to shift production would be incentivized to follow market signals closely.

- Third, the price shape risk, or the risk of a long-term and fixed production factor failing to capture and encourage energy delivery during higher pricing periods, needs to be managed. On this risk, we are encouraged by the IESO's proposal to consider a monthly production factor. However, we recommend that these production factors and deemed energy be calculated with monthly and independent On-Peak and Off-Peak values. More precisely,
 - o production factors should be established individually for all 12 months of the year, with each month having two different factors for On-Peak and Off-Peak periods, and;
 - o market prices should be calculated as the simple average of 12 months of a year, for both On-Peak and Off-Peak periods.

This approach has the advantage of reducing the mismatch between the deemed energy revenue from the ePPA and actual market revenues. We welcome the opportunity to clarify our proposal with the IESO.

Overall, we welcome the sample calculations provided by the IESO on slide 13 and the various Curtailment scenarios. We strongly believe that more examples of this kind would help proponents understand the IESO's proposal and advance discussions. In particular, as Market Renewal

Topic	Feedback
	<p>would introduce changes to market design and settlement mechanisms, we would appreciate if the IESO could explore how LMP, negative market pricing, and revised ramp rates would or would be applied to the proposed ePPA, and this by technology type.</p>

DERs

Topic	Feedback
<p>Do you have any comments regarding eligibility requirements for DERs of other general comments?</p>	

Capacity Resources

Topic	Feedback
<p>Do you have any comments regarding considerations for acquiring additional capacity resources, and utilizing a multi-stream approach (energy and capacity streams)?</p>	<p>We strongly support the IESO procuring emerging capacity needs as part of the LT2-RFP process.</p> <p>However, any additional capacity procurement target should be carved out and conducted separately from the energy-specific or the long-lead time (hydro) streams. A single RFP that mingles energy-only resources, capacity resources, and energy+capacity resources would be overly complex in its award selection mechanism. In particular, a deliverability assessment process that mixes energy, capacity, and energy+capacity projects could be tremendously difficult to evaluate.</p>

LT2 Deliverability

Topic	Feedback
Do you have any comments on early deliverability data and evaluation stage deliverability?	<p>While we support the various improvements made by the IESO, we recommend again removing the deliverability testing process as part of the selection mechanism.</p> <p>As an alternative, the IESO should:</p> <ul style="list-style-type: none"> - publish available interconnection capacity rooms by node or zone, - publish information about transmission lines and areas that are unavailable or forbidden for interconnection, and; - establish a mechanism for proponents to build and pay for transmission side upgrades necessary to interconnect their projects. <p>We also request the IESO to confirm, in the context of grid expansions, what pending and planned transmission lines and upgrades should be considered as “interconnectable” by project developers in the LT2-RFP.</p>

Repowering

Topic	Feedback
Do you have any comments around repowering participation?	<p>Again, we strongly recommend not imposing repowering conditions (e.g., minimum capacity and/or energy increase threshold by percentage) for existing assets to participate in the LT2-RFP. Asset owners are best placed to decide, based on economics and their facilities’ condition, how to repower their assets. Imposing an artificial and arbitrary threshold condition would simply discourage RFP participation. To wit, incremental capacity or energy increases might not even be viable due to engineering and/or transmission constraints at existing sites. In the same vein, we recommend that repowered assets compete directly with new projects to maximize competition and RFP supply.</p> <p>As an alternative, the IESO can impose a minimum availability factor to ensure that repowering projects can deliver energy over the life of the new contract.</p>

Long Lead-Time Resources

Topic	Feedback
Do you have any comments on enabling long-lead time resources?	We support a separate long-lead time procurement stream in the LT2-RFP that is dedicated to hydro-electric resources. To be precise, the long-lead time procurement should only allow participation from <u>new</u> hydro-electric resources, and the revenue model offered should fully account for their energy, capacity, and ancillary service contribution to the grid.

General Comments/Feedback

As mentioned above, any revenue model offered by the LT2-RFP must unequivocally protect against the risks of curtailments, the DAM-RT markets, and the price shape. While we appreciate the continued discussion and improvements to the ePPA revenue model, the short timeframe to prepare for the LT2-RFP may not allow for a comprehensive and satisfactory consultation process to account for all three risks. Ultimately, project proponents, investment boards, and lenders must understand and have confidence in the revised ePPA revenue model for the LT2-RFP to be successful and fully subscribed. If consultation cannot arrive quickly at a satisfactory compromise and receive industry support, we strongly recommend the IESO to adopt the true-and-true, fixed-price contract-for-difference model to ensure that the LT2-RFP can be conducted successfully.