

Feedback Form

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

Feedback Provided by:

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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

Topic	Feedback
<p>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)</p> <ul style="list-style-type: none"> 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) 	<p>In absence of storage, Suppliers can't control when the sun shines and the wind blows, in essence we can't control when we have the potential to operate.</p> <p>The IESO should therefore use real time LMPs with the actual weighted production forecast for the resource in real time for the deeming calculation.</p> <p>The more granular production factors (i.e. monthly) the better as the resource changes throughout the year.</p> <p>There remain significant concerns around the willingness for the lending community to provide debt consistent with past Debt Service Coverage Ratios for past IESO procurements. Keep in mind, credit committees look for reasons to not lend, and the amount of competition from other Canadian jurisdictions will mean tier 1 lenders may not be as willing to provide favorable terms if other jurisdictions are providing less risky contract structures. This will mean higher DSCRs, higher risk premiums and therefore higher costs for developers and rate payers.</p>

DERs

Topic	Feedback
<p>Do you have any comments regarding eligibility requirements for DERs of other general comments?</p>	<p>No.</p>

Capacity Resources

Topic	Feedback
Do you have any comments regarding considerations for acquiring additional capacity resources, and utilizing a multi-stream approach (energy and capacity streams)?	<p>We support two streams, one for energy and a second for capacity, each with a separate form of contract.</p> <p>For the capacity stream, the IESO should not require that they are co-located with energy resources.</p>

LT2 Deliverability

Topic	Feedback
Do you have any comments on early deliverability data and evaluation stage deliverability?	<p>The proposed approach for deliverability puts more development risk on developers as compared to E-LT-1/LT1.</p> <p>The sooner information with as much granularity as possible can be provided the better.</p>

Repowering

Topic	Feedback
Do you have any comments around repowering participation?	Repowering should be in a separate procurement focused on similar types of resources as it has the potential to create a significant advantage for existing generators. If there is no limit on repowering competing with new build resources, this will hinder the willingness of new build projects to participate.

Long Lead-Time Resources

Topic	Feedback
Do you have any comments on enabling long-lead time resources?	

General Comments/Feedback

We continue to have significant concerns about the way the IESO has communicated it would select a winning proposal, based solely on its Revenue Requirement, while ignoring the value that each resource will provide to the system based on the hours in which it provides that energy. Generation resources that provide power during periods of higher priced hours and system peaks should be awarded credits or benefits in the evaluation, or the IESO will need to procure for additional capacity resources.

The summary below depicts two power plants, one wind, one solar, based on data coming from the IESO’s Generator Output and Capability reports from 2019 to 2023. They show that despite a lower capacity factor, 1) solar produces energy during higher price hours than wind and 2) provides significantly more energy than wind during the top 5 demand hours of the year. Using the capacity value based on recent E-LT1 procurement, this additional capacity value means that solar’s combined energy and capacity value are more than double a wind plant that provides the same amount of energy.

The IESO should consider this incremental system value (or Effective Load Carrying Capacity of solar) in its evaluation for new generation contracts.

Table 1 – Value of Wind and Solar Plant Operating in Ontario

	Units	Wind	Solar	Source
Facility Size	MW	100	161	Example to get approximately equal annual energy
Capacity Factor	%	28.8%	17.9%	IESO: Generator Capability and Output Reports 2019-2023
Annual Output	GWh/year	252.0	252.4	Calculated
Value of Energy	\$/MWh	\$22.64	\$28.68	IESO: Hourly HOEP and Hourly Output
	\$/year	\$5,705,912	\$7,239,671	
Peak Coincidence	%	21.9%	39.3%	IESO: Top 5 Peaks and Hourly Output
Output During Peaks	MW	21.9	63.3	
Value of Capacity	\$/MW-year	\$221,154	\$221,154	IESO: Results of E-LT1 RFP, 2023, times 251 business days per year
	\$/year	\$4,842,797	\$14,002,599	
	\$/MWh	\$19.22	\$55.47	
Market Value	\$/year	\$10,548,709	\$21,242,270	
	\$/MWh	\$41.86	\$84.15	
Solar Premium	%		101%	

1. Consider two facilities: a 100-MW wind farm and a 161-MW solar farm. Based on Generator Output and Capability Reports for 2019-2023, average capacity factors were 29% for wind and 18% for solar, which means both facilities would produce the same amount of energy: 252 GWh/year.
2. Based on that same period (2019-2023), the average value of wind and solar output on the wholesale energy market was \$22.64 for wind and \$28.68 for solar.
3. During the 25 Top 5 Peak hours in that same period (2019-2023; note that 2023 Top 5 Peak hours are provisional until April 30, 2024), the output of wind and solar plants was 22% and 39% of installed capacity respectively. That means that these two hypothetical facilities (100 MW wind, 161 MW solar) would have generated on average 22 and 63 MW respectively.

4. Based on the recent E-LT1 procurement, the value of capacity is \$881.09/MW-business day or approximately \$221,000/MW-year. Applying this value to output during top 5 peaks, the capacity value of the output of the wind and solar facilities can be estimated to be \$4.8 million and \$14.0 million respectively. Dividing by annual output (252 GWh/year), this is equivalent to \$19.22 and \$55.47/MWh respectively.
5. The market value of wind and solar energy can thus be estimate to be (\$22.64 + \$19.22 =) \$41.86 for wind and (\$28.68 + \$55.47=) \$84.15 respectively – i.e., the market value of a MWh of solar energy is approximately double that of wind.
6. The additional value that solar provides should be recognized, based on expected future values of energy and capacity, not (as in this example) on historical values.