Feedback Form

Long-Term 2 RFP – December 13, 2023

Feedback Provided by:

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[redacted]

Date: January 15, 2024

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

Following the LT2 RFP 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 mailto:engagement@ieso.ca by January 15, 2024. If you wish to provide confidential feedback, please mark "Confidential". Feedback that is not marked "Confidential" will be posted on the engagement webpage.

Resource Adequacy Framework and Cadenced Procurement Approach

Topic	Feedback
Do you have any comments or concerns regarding the cadenced nature between upcoming LT and MT RFPs?	
Do you have any comments or concerns regarding the proposed offering of both capacity style and new revenue model style of contracts, based on resource eligibility requirements and system needs?	
Do you have any concerns regarding the proposed target setting approach for upcoming MT RFPs?	
Do you have any comments regarding how best to employ bridging and extensions to contracts to facilitate the success of the Resource Adequacy Framework?	

LT2 RFP Resource Eligibility and Timelines

Topic	Feedback
Do you have any general feedback on resource eligibility and timelines?	
If the potential of repowering an existing facility applies to you, would you be interested in exploring this option further?	
How should the optimal threshold for what constitutes a partial or fully repowered facility be determined and what considerations should be taken into account regarding the repowering of different resource types?	

Topic	Feedback
What considerations should be taken into account for new-build DERs?	
Please express any interest and opportunities for uprates and/or expansions at any of your existing facilities.	

LT2 RFP Design Considerations – System Congestion and Deliverability Approach

Topic	Feedback
What early system congestion information do proponents need to guide them in choosing the location of their projects and when is this needed by within the procurement cycle?	
Do you have any general suggestions for how to approach deliverability evaluation in the LT2 RFP?	

LT2 RFP Design Considerations – General Feedback

Topic	Feedback
Do you have any comments regarding the impacts that agricultural land-use limitations may have on project development?	Please see below under **'General Comments / Feedback'.**
Do you have any comments regarding what evaluation criteria can be utilized to evaluate project readiness, given tight timelines and reliability needs?	
Do you have input on the proposed mechanism for valuing Indigenous participation?	

Topic	Feedback
Are there any other rated criteria that should be considered?	

Long Lead Time Resources

Topic	Feedback
Does the proposed approach to enabling long-lead time resources enable meaningful participation or sufficient certainty?	
What additional considerations should the IESO contemplate for enabling broader participation from long-lead time resources?	

Revenue Model

Topic	Feedback
As a potential proponent, are you generally supportive of the proposed Enhanced PPA revenue model? Are there any other considerations that the IESO should look into further with regards to the revenue model?	

General Comments/Feedback

The sole focus of this feedback is with respect to the impacts that agricultural land-use considerations may have on project development and more specifically wind project development.

We thank you for the opportunity to provide practical industry observations and advice in respect of the future for Ontario's power system, which is about to undergo an unprecedented major transition and growth period. Securing a clean, reliable generation mix in our supply portfolio will be of the utmost importance if we are to continue to enjoy competitive electricity rates that will contribute positively to our economic well-being.

Venfor Inc. is comprised of a team of technology agnostic developers and entrepreneurs with decades of experience in the Ontario electricity and natural gas sectors. In the past, members of our

network have successfully developed natural gas plants, wind farms, landfill gas plants, natural gas storage and district energy systems as required to satisfy Ontario's evolving energy needs. We are motivated by economic logic, not ideology; we firmly and respectfully believe that there is no singular solution to Ontario's challenge of decarbonisation and electrification.

As Ontario continues to implement solutions to meet these challenges, we welcome the purpose of the LT2 RFP to procure energy from all non-emitting resources (i.e. wind, solar, biofuels, waterpower and hybrids - renewables paired with storage). However, we are concerned that some parties are calling for restrictions on siting based on agricultural land use, previously limited to ground-mount solar PV generation, be expanded to include wind.

Simply put, wind projects are not the same as solar projects, have significantly different attributes and as such have very different impacts. In addition, not allowing wind projects to be sited on Canada Land Inventory Class 1, 2 and 3 lands (i.e. the restriction previously limited to ground-mount solar PV generation projects) would effectively eliminate the development of any wind projects in southern Ontario. Southern Ontario is, of course, the area of the province where most of the electrical load is located and significant transmission / connection availability either already exists or is best to expand from a schedule, technical and cost perspective.

To illustrate the point, the table below offers a direct comparison of the attributes / impacts of wind and solar projects:

Attributes / Impacts	**Wind**	**Solar**
A – Energy Generation: (based on current technology)	• Expected generation per year from a single 6 MW Wind Turbine Generator ("WTG") ≈ 20,000 MWh / year (≈ 40% capacity factor).	• For comparative purposes, expected generation from a 6 MW solar PV installation ≈ 8,000 MWh / year (≈ 15% capacity factor).
B – Land Use: (Ontario's total farm area in 2021 = 11.8 million acres) *	• Wind project installations on farmland allow for the continued use of most of the property for continued farming operations.	• Solar PV project installations on farmland typically displace any existing farming operations.
	• A single 6 MW WTG installation occupies approximately 1 acre of land including the WTG access road which is located in coordination with the landowner to improve access and farming efficiency.	• A 6 MW solar PV installation occupies approximately 50 acres of land.

	The land use requirements for solar PV vs. wind are: 50 times greater from a capacity perspective and 125 times greater from an energy perspective. Amount of land required to meet the IESO LT2 RFP 2,000 MW target would be: ≈ 330 acres for wind (< 3 thousandths of 1% of Ontario's farm area) and ≈ 16,670 acres for solar. Amount of land required to meet the IESO LT2 RFP 5 TWh energy target would be: ≈ 250 acres for wind (≈ 2 thousandths of 1% of Ontario's farm area) and ≈ 31,250 acres for solar.	
	• Due to siting constraints and other requirements (e.g. setbacks from roads, noise receptors, environmentally sensitive areas, etc.), most farm area in Ontario cannot be used to site a WTG. Based on detailed analysis, we estimate that < 5% of farm area in Ontario would be available to site a WTG. When coupled with the additional technical setback constraints restricting WTGs from being too close to each other, even less farm area in Ontario could be used to site a WTG.	• Aside from restrictions on siting on Canada Land Inventory Class 1, 2 and 3 lands, solar PV can be sited just about anywhere in Ontario.

C – Community Benefits:	LOCAL COMMUNITY • Increased tax revenues. • Most wind projects typically enter into a Community Benefit Agreement (CBA) with the host municipality providing a significant new source of revenue to the local municipality.	LOCAL COMMUNITY • Increased tax revenues. • Most solar PV projects typically enter into a Community Benefit Agreement (CBA) with the host municipality providing a new source of revenue to the local municipality.
	HOST LANDOWNERS • Provides a new, predictable and significant long term revenue source. • Increased revenue facilitates succession planning in family-owned farms allowing for the next generation to continue farming operations and remain on the land.	HOST LANDOWNERS • In instances where the farmland is rented rather than simply sold to the solar PV project developers, landowners receive a predictable long term revenue stream.

	• Often, the increased revenues are reinvested into the farm on new equipment or facilities improving farming efficiencies and production.	

D – System Benefits:	COST • As noted in the IESO's Resource Adequacy Update to the Minister of Energy on December 11, 2023 - Evaluating Procurement Options for Supply Adequacy, wind is anticipated to provide the lowest cost of energy under a competitive procurement mechanism such as the IESO LT2 RFP. • Unlike commodity-based forms of energy (e.g. natural gas, biomass), wind and solar offer a predictable and stable pricing structure with no exposure to commodity pricing volatility.	COST • As noted in the IESO's Resource Adequacy Update to the Minister of Energy on December 11, 2023 - Evaluating Procurement Options for Supply Adequacy, solar after wind is anticipated to provide the next lowest cost of energy under a competitive procurement mechanism such as the IESO LT2 RFP. • Unlike commodity-based forms of energy (e.g. natural gas, biomass), wind and solar offer a predictable and stable pricing structure with no exposure to commodity pricing volatility.
	GENERATION PROFILE • As Ontario's load profile starts to shift from summer to winter as home heating electrifies, wind is ideally suited to meet this shift as this is when wind output is generally much higher.	GENERATION PROFILE • Solar's predominant summer energy production helps meet summer energy peaks during periods of high cooling demand.
	DECARBONISATION OF GRID • Without any greenhouse gas emissions, wind assists in the further decarbonisation of Ontario's electricity supply.	DECARBONISATION OF GRID • Without any greenhouse gas emissions, solar assists in the further decarbonisation of Ontario's electricity supply.

Aside from the obvious differences between the attributes / impacts of wind and solar projects illustrated above, we respectfully suggest that effectively eliminating the development of any wind projects in southern Ontario because of restrictions on siting like those imposed on solar projects based on the Canada Land Inventory land classification would have significant cost and schedule impacts. These impacts flow from the fact that if wind projects cannot be built in southern Ontario, then they would have to be built solely in northern Ontario which raises numerous issues including:

1. **Transmission Capacity:**
   Although the details surrounding northern transmission capacity are beyond the scope of this letter, it is our understanding from speaking to industry experts in this area that there are transmission constraints that would limit any significant flows of energy from the northern part of Ontario to service the loads in the south. We understand that to rectify this situation would require massive investments in new transmission capacity and a permitting and implementation schedule outside the scope of the IESO's currently planned procurements. This would result in higher costs and the risk of not being able to deliver the necessary amounts of energy forecast to be needed by the province when needed, if at all.

2. **Wind Resource:**
   For a given wind project of the same size, we estimate that on average the energy generated by a project located in northern Ontario would produce 20-30% less energy than one located in southern Ontario resulting in materially higher energy costs for wind projects located in northern Ontario versus those located in southern Ontario.

3. **Proximity to Load:**
   Having generation capacity closer to the load generally results in lower capital investments in transmission capacity, lower transmission losses and enhanced system reliability. Although difficult to quantify, considering that most of the electrical load in Ontario resides in the south, there is little doubt that restricting the development of wind projects to the north would add unnecessary cost and reduce system reliability.

4. **Impact on Project Costs due to Local Infrastructure and Terrain:**
   The costs and time associated with the development, construction and operation of utility scale wind projects are materially impacted by their proximity to existing infrastructure and services as well as the type of terrain where they are located.
   Northern Ontario's is a beautiful part of the province but its remoteness and rugged beauty come at a cost in infrastructure and services relative to highly developed southern Ontario. Add to this the rough and undeveloped northern terrain compared to the flat cleared areas of southern Ontario and it's easy to see why it takes longer and costs materially more to develop wind projects in northern versus southern Ontario.

All the above, particularly when assessed in aggregate, have the potential to significantly increase costs to rate payers. Even more importantly, these issues will impact the ability to deliver the necessary amounts of energy forecast to be needed by the province when needed, if at all, a potentially disastrous possibility.

To be clear, we are not suggesting that there should not be any wind development in northern Ontario. We are simply suggesting that aside from the obvious benefits that wind projects can bring to farming communities in southern Ontario, limiting wind development solely to northern Ontario is something that will not only have significant cost implications but also possibly put the IESO's entire procurement strategy at risk, particularly in the short to near term.

As citizens, businesspeople, ratepayers, and taxpayers, and considering the government's objective of ensuring affordability and cost-effectiveness will remain a core driver for future procurements, we

think it should be obvious that implementing such a restrictive siting policy on wind projects is unwise and should not be adopted.

* Ontario is an agricultural powerhouse that leads in many farming categories (statcan.gc.ca)