POWER WORKERS' UNION

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Independent Electricity System Operator
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Via email to engagement@ieso.ca

Re: DER White Paper Part 2: Exploring Expanded DER Participation in the IESO-Administered Markets

The Power Workers' Union ("PWU") represents a large portion of the employees working in Ontario's electricity industry. Attached please find a list of PWU employers.

The PWU appreciates the opportunity to provide input on the *DER White Paper Part 2: Exploring Expanded DER Participation in the IESO-Administered Markets* engagement. The PWU is a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of low-cost, low-carbon energy to the competitiveness of Ontario's economic sectors.

The PWU believes that IESO processes and initiatives should deliver energy at the lowest reasonable cost while stimulating job creation and growing the province's gross domestic product (GDP). We are respectfully submitting our detailed observations and recommendations.

We hope you will find the PWU's comments useful.

Yours very truly,

Jeff Parnell
President

List of PWU Employers

Abraflex (2004) Ltd.
Alectra Utilities
Algoma Power
Aptum
Atlantic Power Corporation - Calstock Power Plant
Atlantic Power Corporation - Kapuskasing Power Plant
Atlantic Power Corporation - Nipigon Power Plant
Atura - Halton Hills Generating Station
Atura - Napanee Generating Station
Atura - Portlands Energy Centre
Atura – Brighton Beach Generating Station
Bracebridge Generation
Brookfield Power Wind Operations
Brookfield Renewable Power - Mississagi Power Trust
Bruce Power Inc.
Canadian Nuclear Laboratories
Cochrane Telecom Services
Compass Group (Bruce NPD)
Comapss Group (Pickering NGS)
Compass Group (Darlington NGS)
Corporation of the County of Brant
Covanta Durham York Renewable Energy Ltd.
Electrical Safety Authority
Elexicon Energy Inc.
Enwave Windsor
EPCOR Electricity Distribution Ontario Inc.
Erth Power Corporation
Erth Holdings Inc
Ethos Energy Inc.
Great Lakes Power (Generation)
Greenfield South Power Corporation
Grimsby Power Incorporated
Halton Hills Hydro Inc.
Hydro One Inc.
Hydro One CSO
Hydro One Sault Ste. Marie
Independent Electricity System Operator
Inergi LP
InnPower
Kinectrics Inc.
Kitchener-Wilmot Hydro Inc.
Lakeland Power Distribution
Laurentis Energy Partners
London Hydro Corporation
Milton Hydro Distribution Inc.
New Horizon System Solutions
Newmarket -Tay/Midland Hydro Ltd.
Nuclear Waste Management Organization
Ontario Power Generation Inc.
Orangeville Hydro Limited
PUC Services
Quality Tree Service
Rogers Communications (Kincardine Cable TV Ltd.)
Sioux Lookout Hydro Inc.
SouthWestern Energy
Synergy North Corporation
Tillsonburg Hydro Inc.
Toronto Hydro
TransAlta Generation Partnership O.H.S.C.
Westario Power

IESO White Paper Part II: Exploring Expanded DER Participation in the IESO-Administered Markets Submission

The Power Workers' Union (PWU) is pleased to submit comments and recommendations to the Independent Electricity System Operator (IESO) regarding the white paper titled "*Exploring Expanded DER Participation in the IESO-Administered Markets*". The PWU is a strong supporter and advocate for the prudent and rational reform of Ontario's electricity sector and recognizes the importance of planning for low-cost, low-carbon energy solutions to enhance the competitiveness of Ontario's economy.

Part 1 of the white paper, released last year, defined the conceptual models for how distributed energy resources (DERs) can participate in IESO administered markets (IAMs). Part 2 of the IESO's white paper provides an analysis of related options with recommendations on their further study or justification for a pilot program. The IESO has requested feedback on these recommendations.

The PWU commends the analyses undertaken by the IESO. The PWU has submitted feedback on Part 1 and the previous draft of Part 2 and is pleased that the IESO has taken some of this feedback into consideration. In particular, the PWU supports the IESO's assessment of the benefits and costs arising from these options, the identification of the system needs for DERs, and the proposed study of the existing and future DER development in Ontario. This study would address a key factor identified by the PWU as being required to inform the net benefits of IESO investments, when such investments are most appropriate and whether ratepayers should bear the cost.

However, many of the PWU's points, made in our past submissions have not yet been sufficiently addressed. The IESO has presented a qualitative assessment of the anticipated benefits without clearly characterizing how the costs and benefits of the options proposed will be quantified. The PWU has consistently stressed the importance of quantifying the costs and benefits of any proposed solutions to enable the determination and selection of the lowest total system cost option.

Additionally, the PWU provides the following recommendations in response to the IESO's requested feedback on ways to encourage DER, appropriate implementation considerations, and stakeholder impacts. The IESO should:

1) Place primary emphasis on encouraging DER participation where and when clear system benefits are shown;
2) Complete the review of DER potential before proceeding with any further discussions;
3) Not pursue IAM participation models for aggregated non-dispatchable generation at this time;
4) Decide on pilots after the planned assessment of DER potential has been demonstrated;
5) Avail itself of the OEB's DER Connections Review consultation proceedings to help inform the interoperability and aggregation of DERs of less than 10 MW;
6) Not commit ratepayer funds to identify and communicate host capacity without clearly identifying an equal or greater benefit to ratepayers; and,
7) Seek legislative and regulatory clarity for accommodating DER on Ontario's electricity system as it further considers the merits of the available options.

Recommendation #1 –Place primary emphasis on encouraging DER participation where and when clear system benefits are shown.

The IESO has asked for feedback on the options which would most effectively encourage DER participation in the IAMs. Maximizing DER participation in the IAMs should not be a goal in, and, of itself. The focus should be on maximizing the participation of beneficial DER into the IAMs. The PWU has previously noted that the value of DER in Ontario's current supply mix is highly questionable and that DER costs have been shifted from ratepayers to taxpayers. The PWU appreciates that innovations may evolve the solutions to rectify these outcomes.[1]

Recommendation #2 – Complete the review of DER potential before proceeding with any further discussions.

The cost benefits of modifying the IAMs to accommodate DERs will be determined by the capacity of DERs that are selected. The IESO recommendations regarding further consideration of whether to reduce the minimum size requirement for IAM participation, consider multi-nodal aggregation boundaries, and investigate telemetry alternatives are all impacted by such capacity forecasts. While considering these options further may be reasonable as the IESO suggests, such an assessment would benefit from the IESO's completion of its proposed studies on the DER penetration potential and associated timelines.

Recommendation #3 – Do not pursue IAM participation models for aggregated non-dispatchable generation at this time.

This option allows existing intermittent DERs to participate in IAMs, as these providers transition from their FIT and micro-FIT contracts. However, the IESO's data shows that a material amount of these existing DER contracts will not expire until post 2030. Furthermore, the IESO's framework for procuring capacity to secure resource adequacy beyond 2025 is currently under development. This could include non-market mechanisms for capacity procurement and clear specification of supply requirements (which could negate the use of non-dispatchable resources). Recent analysis has shown that such non-dispatchable resources are unlikely to be competitive in Ontario's markets.[2] Finally, the IESO states that this option would involve a "*significant undertaking*". Given the uncertainties related to the anticipated benefits, the extended timeline before a solution is needed, and the undetermined impacts on total system cost, there is no clear rationale for spending ratepayer resources at this time to further consider accommodating aggregated non-dispatchable resources in the IAMs. This recommendation is consistent with the PWU's February submission[3] regarding the uncertainties associated with the value of maintaining these resources. This white paper does not provide evidence to the contrary.

Recommendation #4 – Decide on pilots after the planned assessment of DER potential has been demonstrated.

The IESO suggests that pilot projects be undertaken to further explore and understand the implementation challenges and merits of mixed generation/DER aggregations described in their paper. The IESO has not made clear the criteria it would use to determine the timing and scope for a pilot

[1] Ontario Budget, November 2020
[2] Strategic Policy Economics, "Electricity Markets in Ontario: An investigation", 2020
[3] PWU, Response to Options and Considerations for Enabling DER Participation, February 7, 2020

project. Completing the IESO's planned study of DER penetration and potential will enable a quantified cost-benefit analysis (CBA) for accommodating DERs within the IAMs. If the resultant CBA warrants pursuit of the identified options, it may, or may not, prove prudent to use ratepayer funds to initiate such pilots. The IESO should consider using pilots to inform technical questions, and most importantly, to validate the cost-benefits and impacts on total system costs.

Recommendation #5 – The IESO should avail itself of the OEB's DER Connections Review consultation proceedings to help inform the interoperability and aggregation of DERs of less than 10 MW.

The OEB is currently reviewing the DER connections process defined by the Distribution System Code (DSC). The current DSC only requires the Local Distribution Company (LDC) to engage the IESO with a connection impact assessment when a proposed DER is greater than 10MW in capacity. The DSC addresses all other connections with the LDCs to enable them to identify distribution system impacts and costs before the deployment of a DER. A risk-based approach to these connections is being developed as a potential alternative criterion to size in other jurisdictions.[4] The subject of interoperability issues has also been discussed, with some participants suggesting that the IESO be included in the discussion, particularly on the subject of aggregated behaviours.

Recommendation #6 – The IESO and LDCs should not commit ratepayer funds to identify and communicate host capacity without clearly identifying an equal or greater benefit to ratepayers.

The rationale for expending ratepayer funds to create an information base for LDC capacity challenges to the benefit of DER proponents, by either the IESO and or the LDCs, remains unclear. Specifically, there is no recognized need for such DER deployments in Ontario's electricity system. As well, ample evidence exists showing that many DER deployments in the province are incented by Ontario's lucrative Industrial Conservation Initiative (ICI).

The OEB's regulatory principle of beneficiary pays should be used to determine who should pay the costs of providing this data. Without a clearly determined system benefit, the information required for a DER connection should be paid for by DER proponents, not from the rate base. A preliminary discussion of this issue in the OEB's DER Connections Review consultation suggested that such information be provided where known, but without obligating LDCs to fill in the gaps. Some of Ontario's LDCs have significant information available as the IESO suggests, while others expressed the concern that the required effort could be onerous. The OEB working group discussions on this matter have not yet concluded.

Recommendation #7 – Seek legislative and regulatory clarity for accommodating DERs in Ontario's electricity system as it further considers the merits of the available options

The increase in DERs and their integration in Ontario's electricity system is being examined in several forums. In addition to the "white paper" series, the IESO is exploring DER related issues in the Energy Storage Advisory Group, the Grid-LDC Interoperability Standing Committee, and the York Region Non-Wires Alternative Demo Project. As well, the OEB has the DER Connections Review and Utility Remuneration & Responding to DER consultations underway, while the Ministry of Energy, Northern Development, and Mines (MENDM) is consulting on community net metering. All of this activity is

[4] Interstate Renewable Energy Council, Inc., Model Interconnection Procedures (2019)

continuing in spite of the absence of a clear system need for DER resources and rationale for the expenditure of ratepayer funds to advance DER penetration and accommodation.

The legislative and regulatory framework currently in place includes the IESO Marketplace rules[5]; Distribution System Code; Ontario Electricity Act, 1998; and the OEB Act, 1998. Much of this framework was modified when the Green Energy Act (GEA) was introduced. However, with the repeal of the GEA, these documents have not been updated, leaving significant ambiguity regarding the obligation to connect resources. The term "renewables" is found in many places, but DER proponents today are mostly concerned with storage. The GEA inspired guidance, which specifically relates to renewables in these documents, is based on government policy that does not exist today and was not contemplated at the time to include storage.

This circumstance underscores the importance of ensuring that CBAs are conducted on all matters pertaining to DERs. All indications – experience in other jurisdictions and analyses suggest that these technologies increase costs to ratepayers with no benefits as there are no known system requirements for such deployments.

Closing

The PWU has a successful track record of working with others in collaborative partnerships. We look forward to continuing to work with the IESO and other energy stakeholders to strengthen and modernize Ontario's electricity system. The PWU is committed to the following principles: Create opportunities for sustainable, high-pay, high-skill jobs; ensure reliable, affordable, environmentally responsible electricity; build economic growth for Ontario's communities; and, promote intelligent reform of Ontario's energy policy.

We believe these recommendations are consistent with, and supportive of Ontario's objectives to supply low-cost and reliable electricity for all Ontarians. The PWU looks forward to discussing these comments in greater detail with the IESO and participating in the ongoing stakeholder engagements.

[5] e.g., the 10 MW limit on conducting system impact assessments below which DER are exempt, yet smaller DER could have an impact on IESO's system as identified in their aggregation and T-D interoperability concerns.