



October 18, 2019

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Ontario Energy Board
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Via email to boardsec@oeb.ca

**Re: Utility Remuneration (EB-2018-0287) and Responding to Distributed Energy Resources (EB-2018-0288)
Written Comment Phase Following September Stakeholder Meeting**

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 Utility Remuneration and Responding to Distributed Energy Resources September Stakeholder Meeting. 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 energy to the competitiveness of Ontario's economic sectors.

The PWU believes that OEB policy 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,

Mel Hyatt
President

Encl.

cc: Paul Reece

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Power Workers' Union (PWU)
Utility Remuneration and Responding to Distributed Energy Resources
EB-2018-0287 & EB-2018-0288

The Power Workers' Union (PWU) is pleased to submit comments and make recommendations to the Ontario Energy Board (OEB) regarding the Utility Remuneration and Responding to Distributed Energy Resources (DER) consultation. 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 energy solutions to enhance the competitiveness of Ontario's economic sectors.

On September 17-19, the OEB held stakeholder meetings to help inform the scope of the consultations. The results of these meetings have been made available.¹ The PWU applauds the OEB in undertaking this broad-based consultation to understand the complex issues associated with DER and the impact they may have on Ontario's electricity system. Ontario has DER installations today as a result of well intended but inadequately analyzed and managed programs which have resulted in high costs:

- a) The Feed-in-Tariff (FIT) program overbuilt wind and solar resources to the extent that 19% are being curtailed.² The cost of the FIT program led to a cost crisis in Ontario that became a central issue of the last provincial election.
- b) The Industrial Conservation Initiative (ICI) program which was originally designed to provide a level playing field for large trade-exposed industrial companies in Ontario. Unfortunately, with the advent of DER technologies, this has become a very high cost program that benefits a few at the expense of cost shifting towards the many.³

Both of these circumstances have arisen as result of policies that were not responsive to the needs of the electricity system and which created large legacy costs in the form of invested long lived assets that continue to drive up rates. As a result, the PWU is skeptical of the value of many DER technologies.

As new DER technologies are considered, proper regulations are crucial in protecting ratepayers and ensuring that the lowest total cost solutions result. The PWU believes that the OEB, in its role of protecting rate payers from unnecessary cost growth should consider the following:

- 1) A basis for new DER capacity be established by the demand and supply balance of the province
- 2) The total system cost be assured to decline
- 3) Utilities be permitted to introduce new DER technologies at their own risk
- 4) A definition of DERs be created to capture how they may impact the overall system
- 5) Ensure DER decisions are informed by appropriate price signals.

¹ Strategy Corp., "Facilitation Report: September 17-19, 2019"

² IESO, 2018 Year-End Electricity Data

³ OEB Market Surveillance Panel, "The Industrial Conservation Initiative: Evaluating its Impact and Potential Alternative Approaches", 2018

Recommendation #1 – Adding DER capacity should be responsive to the needs of the province’s supply and demand balance

For DER that would act as generators and put energy back onto the system, approval of their deployment must be in the context of Ontario’s supply and demand needs. The mere existence of DER technologies, the cost-benefit of which is not supported by sound and sufficient data and analyses, should not lead the province to commit to the integration of DERs into the system. Ontario should not repeat the mistakes of the Green Energy Act. The IESO is responsible for defining Ontario’s supply-demand balance in Ontario’s Annual Planning Outlook (APO) which they provide to help optimize the overall generation and transmission cost of the system.

Only modest load growth is indicated in the near term by the most recent APO. The implication is that there may be little demand for new generation. In some circumstance, anticipated benefits are expected from avoiding potential distribution (Dx) upgrade investments. While this may be true for an LDC’s decision, the modest forecast load growth suggests the total system cost benefits may be small and not realised for some time. Under these conditions, adding new generation at the Dx level may result in stranded costs at the system level. An example of system cost implications is how the IESO manages surplus baseload generation and the degree to which the IESO has spilled hydro in the presence of excess wind and solar generation.⁴

As part of its procurement approach and capacity auction development, IESO has expressed concern about the uncertainty of its load forecasts. These same load forecasts are predicting a capacity gap for Ontario while the IESO is at the same time stating that Ontario has all of the generation resources that are required.⁵ IESO is concerned about providing flexibility in the presence of this demand uncertainty and is looking to its competitive markets for the solution. This same uncertainty potentially makes DERs attractive due to their scalability and flexibility, but that benefit depends on the associated impacts to rates. The IESO has not yet established how “flexibility” should be valued.

The PWU believes that Ontario’s supply and demand needs should provide the context for establishing the basis for whether any particular DER solution is required. Therefore, DER that is proposed for the purpose of providing generation should be evaluated in the context of the generation procurement needs identified by the IESO outlook processes. It is against this established need that the total system cost benefit of the DER options can best be assessed.

Recommendation #2 – For DER to be approved for the rate base, a decline in total system cost should be assured.

The PWU asserts that DERs should only be accommodated within the rate base when they provide total system cost benefits. Total system costs include energy costs, as represented by the Global Adjustment (GA) and the energy market clearing price (HOEP), the delivery costs covering distribution and transmission, and regulatory charges, such as those incurred by the IESO’s operations. In short, total system costs include any costs that impact the overall rate payer bill. Issues related to increasing the

⁴ OPG, Annual Report, 2016

⁵ IESO, Market Renewal Update from Peter Gregg, July 2019

surplus energy in the system, stranding grid scale generation assets, causing a need for additional ancillary services, as renewables have done, or imposing additional operational needs upon the IESO or LDCs can influence the overall cost benefit. This complex array of factors warrants the development of a formal cost benefit analysis (CBA) when considering whether new DER installations should be considered for the rate base.

Some stakeholders assert that the benefits of DERs are clear and no CBA is necessary. The PWU believes that the facts suggest that this is far from a foregone conclusion. The OEB's provided reference material, particularly that provided by ICF, suggests that while the avoided distribution capacity costs is the likeliest source of benefits, a discussion is needed to evaluate the extent of other claimed benefits (i.e. distribution resiliency & reliability, O&M, etc.).⁶

Renewables-based DERs in Ontario have been shown to have a significantly greater total system cost than other supply sources for generation, due to their intermittency.⁷ However, storage could be a key enabler of shifting demand to better utilize Ontario's baseload resources.

The PWU recommends that a CBA test that establishes whether overall costs will decline should be mandated as part of the DER approval process.

Recommendation #3 – Ensure risks are born by the unregulated side of utilities until benefits of DERs to the rate base are proven

The introduction of DERs into the electricity system is an emerging innovation whose implications are still in the process of being understood. As with all new innovations and technologies, the anticipated costs and benefits may or may not unfold as expected. There is always the risk of costs being higher and benefits not being realized, and as noted in the meeting summary, “there was a high degree of consensus on the fundamental risks”.⁸ Example risks that rate payers should not be expected to accept are increased distribution and transmission infrastructure, such as was required to support wind generation, and the creation of surplus generation that has to be curtailed as has been caused by both wind and solar. Such risks and the costs that they accrue are generally accepted by early adopters who are more motivated to try new technologies than by the cost of their choices. These early risks are generally mitigated before innovations are introduced to mass markets where cost does matter.

Innovation in a competitive fair market system entails some opportunities failing to materialize, and some entities not succeeding. Those willing to take risks should be encouraged to do so, such as early adopters, but not to the extent that the general ratepayers bear the risk cost or early adopter premiums. Utility affiliates have unregulated commercial businesses suitable for exploring early adoption of innovations.

⁶ ICF, “Responding to DER”, 2019

⁷ “Renewables-based Distributed Energy Resources in Ontario Part 2: Cost Implications”, Council for Clean and Reliable Energy, 2019

⁸ Strategy Corp., “Facilitation Report: September 17-19, 2019”

Notwithstanding the above-mentioned recommendation for a CBA, utility affiliates should be free to explore DER innovations at their own cost and risk, outside of the rate base. Once the operational characteristics and benefits are well established and risks mitigated, the innovations can be considered for broader application. Only once the net system benefits to rate payers are known and proven to be positive via a CBA, should the costs be approved for inclusion in the rate base.

Recommendation #4 – Create definitions for DERs that reflect how they interact with the system

A clear definition of what constitutes DER is important to advance the dialog on regulating DER. The OEB provided meeting summary shows that this is a broad concern.

DERs could include any technology that varies load behind-the-meter (BTM). So defined, DERs would include Demand Response (DR), Energy Efficiency (EE), Energy Storage, and distributed generation. On the other hand, DER could be viewed as technologies capable of bi-directional energy flow with the grid, a more focused definition. A broader definition is more difficult to design regulation for, particularly when involving technical requirements imposed on the distribution system and grid.

In this respect, DER could fall into two categories: (1) BTM solutions which do not require grid or system upgrades, and therefore do not impose a cost on the system (e.g. EE or other demand side management technologies); and (2) solutions that do require system upgrades, and hence carry some system cost implications as a result (e.g. intermittent renewables, batteries that require bidirectional flow, etc.).

The interests of ratepayers should be put first by ensuring that the potential for DER driven total system cost implications are reflected in the categorization of DER definitions. The OEB's regulatory attention should explicitly address those technologies that could impact system functionality and potentially impose undue costs on it. The PWU recommends that DERs should be classified according to their impact on total system costs.

Recommendation #5 – Ensure DER decisions are informed by appropriate economic and price signals

Proper price signals are needed to ensure DERs are deployed and operated in a manner that provides the expected benefits to the system, including at peaks.

The price signals that have underpinned DER adoption in Ontario have come from the Feed-in-Tarif (FIT) and Industrial Conservation Initiative (ICI). The heavily subsidized FIT program is no longer offered and as a result solar and wind advocates have been exiting the market place. The ICI provides a price signal based on the ability to reduce a particular customer's Global Adjustment (GA) costs. The ICI was assessed by the Market Surveillance Panel who concluded that the "ICI as presently structured is a complicated and non-transparent means of recovering costs, with limited efficiency benefits".⁹ One unintended consequence of the ICI program is that it has shifted some of these costs to other ratepayers that are not responsible for or benefitting from them.

⁹ OEB Market Surveillance Panel, "The Industrial Conservation Initiative: Evaluating its Impact and Potential Alternative Approaches", 2018

The lessons of the ICI show that it is important to understand both the intended and unintended changes in behavior that may result from price signals developed to address DER adoption. Some consumer groups are distorting their energy consumption, by purposefully wasteful load increases only to qualify for ICI and avoid all of their GA costs through BTM DER, which is an additional cost to the system. Not all cost increases are visible to the OEB, but the consequence of cost shifting does result. The impacts to total system costs and how these costs will be borne by rate payers should be evaluated in the context of the rate designs that are put in place.

There are other economic signals that should be considered such as carbon pricing, anticipated implications of emissions reduction policies, and the economic value of jobs creation. Such factors translate into long term direct costs to both ratepayers and taxpayers. For example, BTM Combined Heat and Power (CHP) plants may be a low-cost option when enabling the deferral or avoidance of distribution upgrades. However, net economic outflows to the U.S., for the purchase of natural gas, and higher carbon emissions when compared to other solutions may make them higher overall economic cost options for the province.¹⁰

The PWU considers it necessary to establish how benefits and costs are quantified, and who they accrue to. Only once this is done will it be possible to separate the benefits of the price signal regime from the actual total system costs that ratepayers will bear.

Concluding Remarks:

The PWU believes that successful integration of DER hinges on carefully crafted and well thought out regulations. The risks of getting it wrong have been exemplified in Ontario's history and ultimately resulted in undue cost increases on ratepayers. Given that this initiative raises many issues that are beyond the current mandates of the OEB, recommendations on how to best approach this consultation have been laid out. Many may require time and co-ordination with all stakeholders, including the OEB (who are responsible for rates regulation, distribution and transmission system codes and connection cost responsibilities, licensing and enforcing IESO market rules, etc.) the IESO (responsible for procurement, planning, market rules, etc.) and Ministry of Energy, Northern Development and Mines (MENDM), who are also evaluating DER and rate implications. Taking the time to get it right is important.

The PWU has a successful track record of working with others in collaborative partnerships. The PWU is committed to the following principles: Create opportunities for sustainable, high-pay, high-skill jobs; ensure reliable, affordable 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 the objectives for supplying low-cost and reliable electricity in Ontario. The PWU looks forward to discussing these comments in greater detail at the OEB's convenience and working with the OEB and other energy stakeholders to advance innovation across Ontario's electricity system.

¹⁰ "Renewables-based Distributed Energy Resources in Ontario Part 3: Economic Implications of 'Made in Ontario'", Council for Clean and Reliable Energy, 2019