CANADIAN MANUFACTURERS & EXPORTERS

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Canadian Manufacturers & Exporters Submission
Consultation on the Utility Remuneration and Responding to Distributed Energy Resources (EB-2018-0287 & EB-2018-0288)

October 17th, 2019

To:

Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, Ontario, M4P 1E4

Overview:

CME is pleased to provide input on the OEB's Utility Remuneration and Responding to Distributed Energy Resources (DER) consultation and appreciates the OEB's continued efforts to deliver an efficient regulatory system and protect ratepayers. From September 17th to 19th, the OEB held a stakeholder meeting to understand the concerns and help inform the scope of the consultations. Numerous stakeholders from a variety of backgrounds made presentations and participated in open forum discussions, including the CME. Throughout the meeting it became clear that there are a variety of views regarding emerging DER technologies and how to best respond to them. For our part, CME is concerned that if handled improperly, regulation of these technologies could result in the rate base bearing undue costs without realizing any purported benefits. Electricity rates impact the province's economic growth and development, particularly for the manufacturing sector which is a critical economy engine for Ontario.

Ontario is becoming an unattractive environment for manufacturing investment in Canada: it has the slowest rate of growth among all Canadian provinces (Figure 1). This has contributed to Canada having the slowest growth in business capital investment among developed countries (Figure 2).

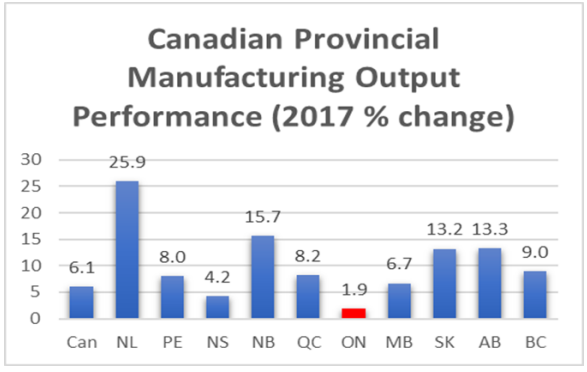

Figure 1 Provincial Manufacturing Output in 2017

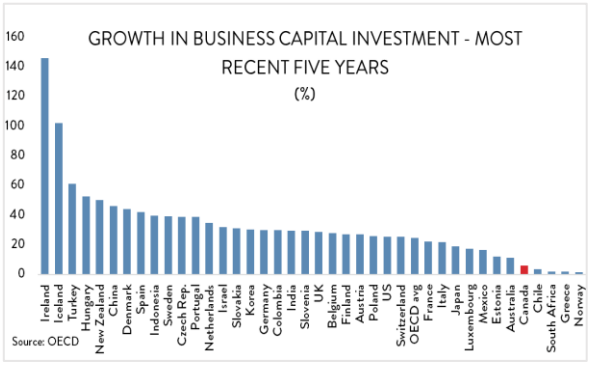

Figure 2 Global Growth in Business Capital Investment

Even Canadian investments have been leaving the country and heading south while US investment in Canada has slowed (Figure 3). This shift in investments is most pronounced in Ontario and is weighing on the rest of the country's manufacturing sector (Figure 4).

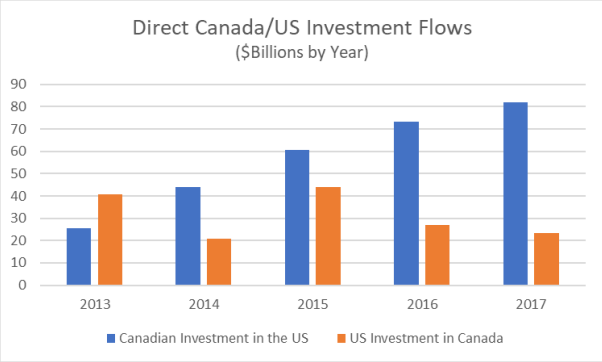

Figure 3 Direct Canada/US Investment Flows

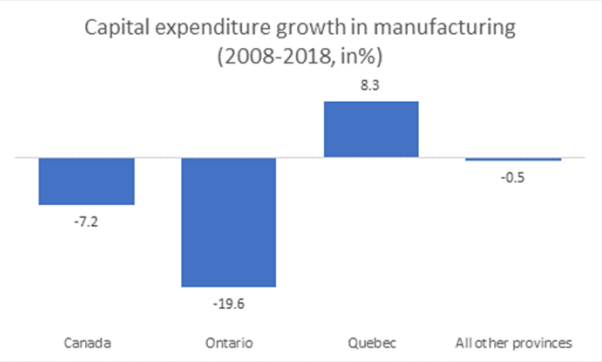

Figure 4 Capital Expenditure Growth in Manufacturing

This loss of investment correlates with what many manufacturers tell us: that the province's energy policies have been effectively pushing local manufacturers to relocate to the United States. Ontario needs to once again leverage its energy policy to attract investment in manufacturing, while at the same time broadening and strengthening the rate base. Otherwise, this means no jobs, less innovation, and lost opportunity. CME believes the cost of doing business must be reduced and CME has identified how energy policy can contribute through the following key principles:

- Energy costs must be affordable, reliable, transparent and sustainable so that industry can become more competitive;
- Energy policies must be informed by evidence-based research as well as data, analysis and comparative case studies;
- Energy policies must be market-based and driven by the need to attract new investment, jobs and new growth;
- Unnecessary red tape and regulations should be eliminated; and,
- Policy recommendations should be adopted only if the full extent of their economic and competitiveness impacts are clearly understood and taken into account.

To this end, CME expects the OEB to ensure that DER adds value to the electricity system without increasing costs to Ontario ratepayers. Based on these principles, CME makes the following recommendations, reiterating those in our presentation and including two additional items:

1. **OEB should consider the parallel consultations and protect ratepayers against increasing total system cost.** DER integration is complex, involves many organizations, and could lead to higher costs. The OEB should uphold its mandate of protecting ratepayers throughout this process.
2. **Policy development must focus on total system cost reduction.** Evolving the electricity system should be done in a way to help Ontario's economy grow, and this can be done by focusing policy on reducing total system costs.

3. **Ensure Ontario's supply and demand balance clearly supports the need for any added DER capacity.** Ontario's emerging capacity gap must be addressed by low-cost options, and not solutions that will place further burdens on ratepayers. Achieving this will require co-ordination with IESO and its procurement practices.
4. **Require that proposed DER options provide a total system cost and benefit analysis.** Only if rate-payers totals bills will be reduced should DER be accommodated in the rate base.
5. **Ensure risks are born by the unregulated side of utilities until benefits of DERs are proven.** Ratepayers should not be expected to bear risks or early adopted premiums while the benefits of DERs remain unproven. Instead, utilities' affiliates should bear these risks.
6. **Create definitions for DERs that reflect how they interact with the system.** Defining DERs according to their impact on system cost will place ratepayers' interests at the heart of decisions for accommodating them into the rate base.
7. **Ensure that adequate price signals are available that reflect actual needs and drive cost benefits into the system.** The impacts to total system costs and how these costs implications will be borne by rate payers should be evaluated in the context of the rate designs that are put in place.

Detailed Rationale for CME's recommendations:

1. <u>OEB Should Protect Ratepayers</u>

Integrating DERs is risky and complex with risks emerging in three particular areas of the process:

a. Unwanted customer choice is creating costs to all ratepayers

CME's submission to the MENDM's consultation[1] on industrial electricity rates made it clear that manufacturers care about low cost. CME is unaware of who these customers are that DER proponents claim are seeking choice. CME members are not seeking choice if it comes at a higher cost. The OEB should ensure that giving customers the choice of using DER comes with cost savings and does not shift costs to other consumers. Early adopters should be allowed to choose higher cost options as long as it does not affect ratepayers negatively.

b. Studies point to DER as high cost options

Studies that consider the total system cost impact of DER are pointing to cost increases arising from these technologies, not cost savings. In fact, the most comprehensive assessment of DER costs for Ontario shows that future DER based on such things as solar and batteries would cost 60% more than grid-based generation solutions (Figure 5).[2] Several technical, administrative, and political challenges exist and failure to get them right could increase costs with no benefit brought to many ratepayers.[3]

[1] CME submission to the MENDM's consultation on industrial electricity rates, 2019
[2] Council for Clean and Reliable Energy, "Renewables-based Distributed Energy Resources in Ontario Part 2: Cost Implications", 2019
[3] Andy Lubershane, Energy Impact Partners, "What to do About DERs?", 2019

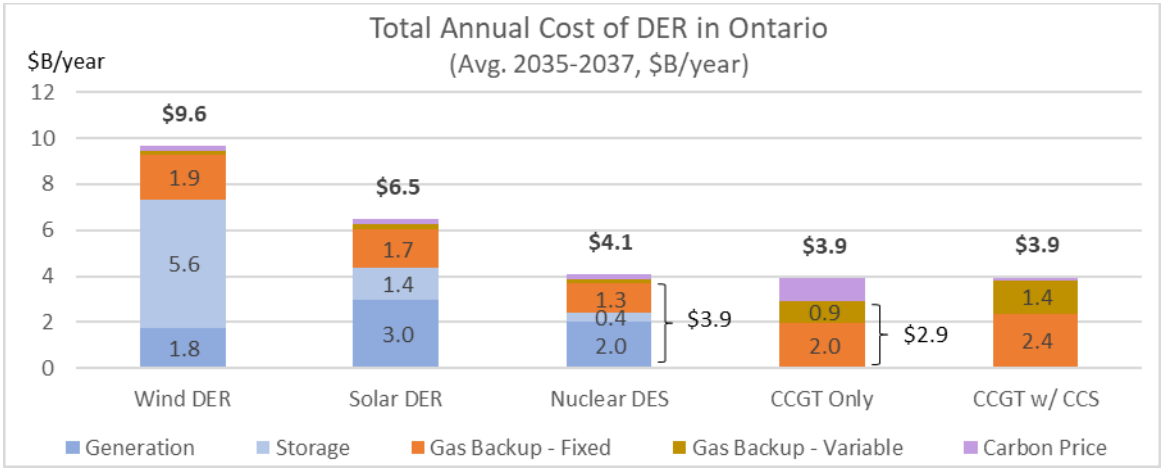

Figure 5 Annual Cost of Meeting Ontario's Capacity Gap 2035
Source: Council for Clean and Reliable Energy, DES is distributed energy storage, CCGT refers to combined cycle gas turbines, CCS to carbon capture and sequestration, carbon price illustrated is $115/tonne

c. Parallel OEB/IESO/MENDM consultations create process risks

The DER issue is playing out across consultations being run by the OEB, IESO and the MENDM. This creates a risk of duplication of work, undue burden on stakeholders, and competing policies being put in place. CME encourages the OEB to consider the outcomes of all of these parallel processes and to co-ordinate with the MENDM and IESO on the topic of DER so that the process is efficient and policies put in place are complementary between the three organizations.

As noted in the stakeholder meeting, customers must come first.[4] To protect ratepayers, the above risks must be considered and regulatory approaches should ensure customers are protected from unnecessary cost increases.

2. <u>Policy Must Focus on Total System Cost</u>

Ontario is currently one of highest electricity rate jurisdictions (Figure 6). If it were not for recent exchange rate changes, electricity rates would be 50% higher than those of New York. New York has seen a 10% decline in electricity rates in the last six years whereas Ontario's rates have climbed almost 30%. This is effectively pushing manufacturing out of the province and impacting Ontario's economy. Manufacturing requires low electricity rates to remain competitive. Competitive electricity rates enable growth and investment in Ontario's manufacturing sector.

[4] Strategy Corp., "Facilitation Report: September 17-19, 2019"

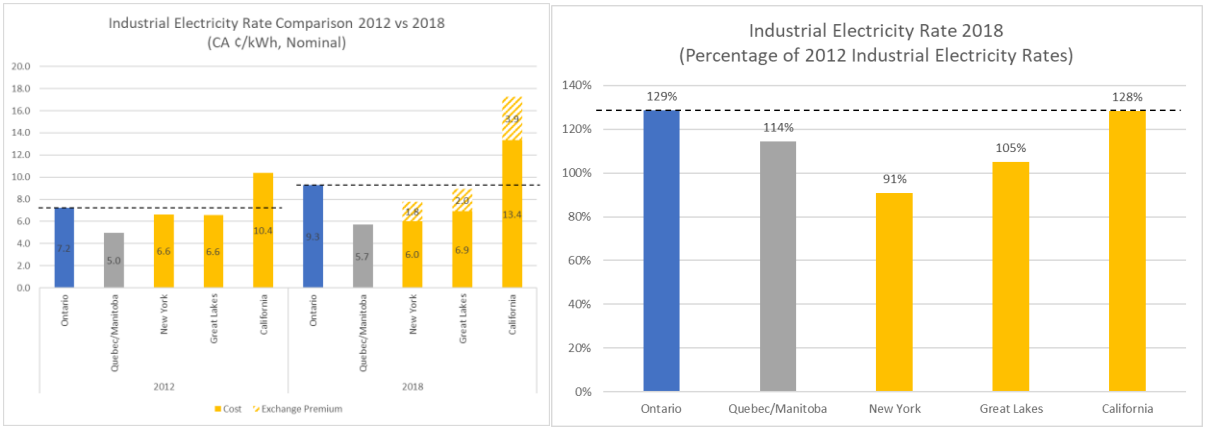

Figure 6 Industrial Electricity Rate Comparison
Source: CME submission to MENDM

The OEB can help prevent a repeat of past poor policy decisions like the Green Economy Act and help Ontario's manufacturing sector by focusing on policy solutions that reduce the total system costs to be borne by ratepayers.

3. Ontario's Supply/Demand Forecast Should Provide Context for DER Need

Participants agreed that the solution must be made for Ontario's specific context[5]. Approving the deployment of DER that would put energy back onto the system must be reviewed in the context of Ontario's supply and demand needs going forward. The IESO is responsible for defining this balance in Ontario's Annual Planning Outlook (APO). It is their role to optimize the cost of the system required to meet consumer demand. The most recent APO indicated only modest load growth in the near term and hence not much demand for new generation. Furthermore, if anticipated benefits are expected from avoiding Dx upgrades, the modest load growth suggests the benefits may be small and not realised for some time. Adding new generation at the Dx level may result in stranded costs at the system level, as has been observed by the degree to which the IESO has spilled hydro in the presence of excess wind and solar generation.

In the long term, the IESO is concerned about the uncertainty of the load forecasts, which are also predicting a capacity gap (Figure 7). Under the current outlook, the IESO is also stating that Ontario has all of the generation resources that are required.[6] IESO is concerned about providing flexibility in the presence of this demand uncertainly 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 depends on the associated impacts to rates. Although this benefit was discussed by stakeholders, neither IESO nor others have yet established how "flexibility" should be valued.

[5] Strategy Corp., "Facilitation Report: September 17-19, 2019"
[6] IESO, Market Renewal Update from Peter Gregg, July 2019

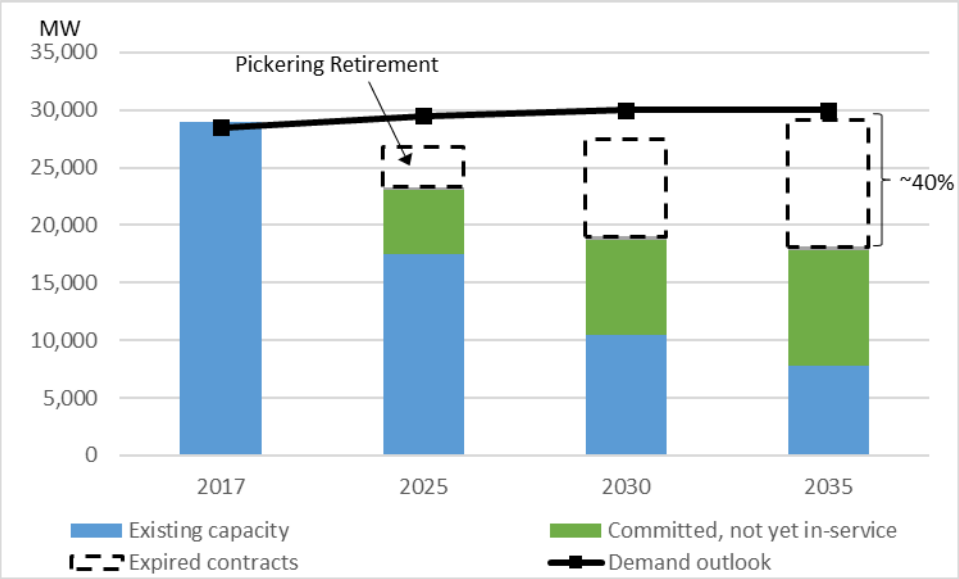

Figure 7 Ontario's Supply and Demand Outlook
Source: Council for Clean and Reliable Energy

CME believes that Ontario's supply and demand needs should provide the context for establishing the basis for whether any particular DER solution is required. DER that is proposed for the purpose of providing generation should be subject to IESO generation procurement needs. It is against this established need that the cost benefit of the DER options can then be assessed. The OEB should consider coordinating its policy development with that of the IESO in the area of DERs.

4. <u>Require Total System Cost and Benefit Analysis for DER Approvals</u>

CME asserts that DERs should only be accommodated when they provide total system cost benefits. A common understanding of what "total system cost" is and what a cost-benefits analysis (CBA) should entail must be established. Since it is the OEB's mandate to protect ratepayers, the definition of total system cost impacts should be created in the context of impacts to the total rate payer bill. ICF's meta-analysis of studies on DER benefits suggests that the avoided distribution capacity costs is the likeliest source of benefits, while a discussion is needed to evaluate the extent of other claimed benefits (i.e. distribution resiliency & reliability, O&M, etc.).[7] While some stakeholders asserted that benefits of DERs are clear and no CBA is necessary, the facts suggest that this is far from a foregone conclusion and still up for debate. As noted in our presentation, early implementation could strand assets and increase costs, DER value is location dependent, and it is not clear how integrating high-cost DERs could reduce total system costs when distribution costs are a much smaller part of ratepayer bills (20% compared to energy which is 70% of total costs).

Thus, a CBA test should be mandated as part of the DER approval process. Only if rate-payers totals bills will be reduced should DER be accommodated in the rate base.

[7] ICF, "Responding to DER", 2019

5. Utilities Should Bear Risks of DERs Until Benefits are Proven

The introduction of DERs into the electricity is system is a new 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 participants noted that there are many ways to get it wrong[8]. These risks are generally accepted by early adopters, but are also generally mitigated before being introduced to, or accepted by, mass markets.

Innovation in a competitive fair market system entails that some opportunities may fail to materialize, and some entities may not succeed. Those willing to take risks should be encouraged to do so, such as early adopters, but not to the extent that ratepayers bear the risk cost or early adopter premiums. CME believes that it is the OEB's mandate is to protect ratepayers from such risk exposure.

Utilities have unregulated commercial businesses (affiliates) which are suitable for exploring early adoption of innovations. Once the 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, should the costs be approved for inclusion in the rate base.

6. Define DER According to System Impacts

The definition of DER is a foundational point of this consultation, and was contentious throughout the meeting[9]. A clear definition of what constitutes DER is important to establish the context of future discussions.

Many stakeholders are defining DERs as any technology that can vary 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, some stakeholders chose a narrower definition, limiting DERs to only include technologies capable of bi-directional flow. These speakers pointed out that too wide of a definition would make it harder to design regulation for DERs. Many arguments for both sides of this debate were brought up including the technical requirements imposed on the grid.

At its core, this consultation is about what rules need to be in place to protect ratepayers and maintain a reliable electricity system. In this respect, distributed technologies generally fall into two categories.

1. **No impacts to system**: Technologies that do not require any changes to the system, and should therefore be easy to integrate and require no new regulations. Examples include EE or other demand side management technologies
2. **Impacts to system:** Technologies that require upgrades, or impose some other functionality on the system, should be regulated by the OEB as they are likely to incur costs. Examples include intermittent renewables, batteries that require bidirectional flow, etc.

[8] Strategy Corp., "Facilitation Report: September 17-19, 2019"
[9] Strategy Corp., "Facilitation Report: September 17-19, 2019"

The OEB's focus in this consultation should be on those technologies that could impact the system and impose undue costs on it. The interests of ratepayers should be placed first by ensuring that the potential for DER driven total system cost implications are reflected in the categorization of DER definitions.

7. <u>Appropriate Rate Design is Essential</u>

A consensus was apparent among stakeholders that proper price signals are needed to ensure DERs are activated in a manner that provides the benefits to the system, including at peaks[10]. 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 functioning and as a result solar and wind advocates have been exiting the market place. The ICI, which provides a price signal based on the ability to reduce a particular customer's Global Adjustment (GA) costs, 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".[11] One unintended consequence of the ICI program is it has shifted some of these costs to other ratepayers that are not responsible for or benefitting from them.

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. The OEB has two other consultations which deal with rate design (C&I and Class B) and which are also grappling with the consequences on total costs and cost redistribution that is inherent in rate design decisions.

The impacts to total system costs and how these costs implications will be borne by rate payers should be evaluated in the context of the rate designs that are put in place. Since rate designs are often influenced by political imperatives, it is important that the OEB advance this dialog in concert wit the IESO and the MENDM processes.

[10] Strategy Corp., "Facilitation Report: September 17-19, 2019"
[11] OEB Market Surveillance Panel, "The Industrial Conservation Initiative: Evaluating its Impact and Potential Alternative Approaches", 2018

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About Canadian Manufacturers & Exporters (CME)

Since 1871, CME has been fighting for the future of Canada's manufacturing and exporting communities and helping them grow. The association directly represents more than 2,500 leading companies nationwide. More than 85 per cent of CME's members are small and medium-sized enterprises. As Canada's leading business network, CME, through various initiatives including the establishment of the Canadian Manufacturing Coalition, touches more than 100,000 companies from coast to coast, engaged in manufacturing, global business and service-related industries. CME's membership network accounts for an estimated 82 per cent of total manufacturing production and 90 per cent of Canada's exports.

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