CANADIAN MANUFACTURERS & EXPORTERS

CME's Response to OEB Utility Remuneration and Responding to Distributed Energy Resources (DER) Consultation

OEB Consultation EB-2018-0287 & EB-2018-0288

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Overview

- Canadian Manufacturers & Exporters (CME) has been helping manufacturers grow for 150 years.
  - Over 400 members in Ontario
  - 85 %of our members are SME's
- Key Principles:
  - Energy costs must be affordable, reliability, 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 marked-based and driven by the need to attract new investment, jobs and new growth
  - Unnecessary red tape and regulations should be eliminated
  - Policy recommendations should be adopted only if the full extent of their economic and competitiveness impacts are clearly understood and taken into account

Premise for Distributed Energy Resources (DER) Consultation

Several motivations identified for regulatory accommodation for DERs

- Enabling more customer choice
- Generating value for customers in a cost effective way
- There is already wide scale adoption in Ontario;
  - Over 4,000 MW in last 10 years[1]
  - But this was only enabled by the ACU and FIT programs[2]

The OEB has launched the Utility Remuneration and Responding to DERs consultation to better understand these complexities

- Requesting stakeholder input on foundational questions
- First step is to help define the scope and objectives of this initiative
- Builds on OEB Advisory Council on Innovation Report feedback

Sources:
1 – "Structural Options for Ontario's Electricity System", ETNO, 2019
2 –"Electricity Storage Systems: Applications and Business Cases", CERI, 2019

Complexity and uncertainty surround the state of DERs

CME highlights five areas for the consultation to address:

1. Integrating DERs is complex and risky
2. Economic competitiveness must be a driver
3. DER value may only be in long term
4. Benefits of DERs for Ontario remain questionable
5. Utilities remuneration case for rate-basing is unclear

Integrating DERs is complex and risky

Risks are emerging in three areas:

1. Consumers want low cost not choice
   - No evidence that consumers really want more choice if it comes with a cost
   - Manufacturers just want low cost[1]
2. DER studies point to higher costs[3]
   - If integration managed poorly, could cause surge in infrastructure costs[2]
   - DER-based renewables could cost 70% more than alternatives to address Ontario's emerging supply gap[4]
3. Parallel OEB/IESO/MoE initiatives create process risks

Recommendation: OEB should consider the parallel consultations and protect ratepayers against increasing total system cost

Sources:
1– CME submission to the MoE's consultation on industrial electricity rates, 2019
2 - "What to do About DERs?" Andy Lubershane, Energy Impact Partners, 2019
3 - "Why Distributed?", IEEE Power & Energy Magazine, 2019
4 – "Renewables based DER in Ontario", Strapolec, 2018

Parallel OEB/IESO/MoE initiatives create process risks

No apparent integration of independent consultations

Organization	Initiative
OEB	Innovation panel that led to Utility Remuneration and DERs consultation; Ongoing consultations in Class B and Global adjustment recovery, and C&I Rate Design
IESO	Market Renewal changing market structure; NERSC subcommittee studying DERs, Innovation Roadmap, Annual Planning Outlook
MENDM	Ongoing consultation on industrial electricity rates

- Competing or conflicting policies could reduce effectiveness
- Process inefficiencies may occur:
  - Duplication of debates during consultation process
  - Difficult for CME to credibly support all initiatives

Sources: OEB, IESO, MENDM

Complex Process

Economic competitiveness must be a driver

Evolving the electricity system must help Ontario's economy

- Reduce total system costs borne by rate payers
- Manufacturing requires low electricity rates to remain competitive
- Competitive electricity rates enable growth and investment in Ontario's manufacturing sector
- Ontario currently one of highest electricity rate jurisdictions
- 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.

Recommendation: Policy development must focus on total system cost reduction

Sources: CME Submission on MENDM Consultation on Industrial Electricity Rates

DER value may only be in long term

Majority of proven benefits is avoiding Dx upgrades[1]

- However, IESO Outlook of flat demand suggests minimal Dx[2] savings

Value Category		Benefit (+) or Cost (-)	# of Studies
Utility System Impacts			
Generation	Avoided Energy Generation	+	15
	Avoided Generation Capacity	+	15
	Avoided Environmental Compliance	+	10
	Fuel Hedging	+	9
	Market Price Response	+	6
	Ancillary Services	+/-	8
Transmission	Avoided Transmission Capacity	+	15
	Avoided Line Losses	+	11
Distribution	**Avoided Distribution Capacity**	+	**14**
	Resiliency & Reliability	+	**5**
	Distribution O&M	+/-	**4**
	Distribution Voltage and Power Quality	+/-	**6**
Other Costs	Integration Costs	-	13
	Lost Utility Revenues	-	7
	Program and Administrative Costs	-	7
Societal Impacts			
Broader Impacts	Avoided Cost of Carbon	+	8
	Other Avoided Environmental Costs	+	9
	Local Economic Benefit	+	3

- There is near consensus amongst regulators and utilities that DER can help avoid the need for new distribution capacity.
- A discussion is needed on distribution resiliency & reliability; O&M; voltage and power quality. Ontario could develop its own framework to evaluate these categories.
- The value to customers (i.e., choice, avoided outages, bill reduction) is highly customer specific and estimates vary.

Image Source: ICF, The Hunt for the Value of Distributed Solar, February 2019

Recommendation: Regulatory approach must consider demand forecast

Sources:
1– “Responding to DER”, ICF, 2019
2 – “Preliminary 2019 Long Term Demand Forecast”, IESO, 2019

Benefits of DERs for Ontario remain questionable

Multiple considerations impact value

1. Early implementation could strand assets and increase costs
2. DER value is location dependent
   - Need for alleviating network losses/congestion and avoiding/deferring infrastructure upgrades vary
   - Implication → DER needs to be considered on a case-by-case basis
3. Not clear how integrating DERs decreases total system cost
   - DER cost can be expected to remain very high in foreseeable future[1]
   - Dx savings are unlikely to offset
   - Implication → Business case for DER is unclear

Recommendation: Establish parameters for business cases including demonstrating reduced total system cost

Sources:
1– "Renewable-based DER in Ontario", Strapolec 2018

Utilities remuneration case for rate-basing is unclear

Utilities may have a conflict of interest in developing[1] DERs

- Uncertain value of DERs implies risk to achieving benefits
- Not yet ready as a mainstream innovation

Principles that guide how remuneration models are formed should include

- Utilities should be bearing risks if they want to be early adopters
- Utilities should bear burden of proof in business case showing net total system cost benefits
- Only solutions with proven net benefits should be put into rate-base

Recommendation: Regulatory approach should include provisions for Utilities to establish net benefits before investments are rate-based

Sources:
1– International Association for Energy Economics “Restructuring Revisited”

Conclusion

Value of DERs needs to be weighed against risk of higher costs

CME has five recommendations for OEB:

1. OEB should consider the parallel consultations and protect ratepayers against increasing total system cost
2. Policy development must focus on total system cost reduction
3. Regulatory approach must consider demand forecast
4. Establish parameters for business cases including demonstrating reduced total system cost
5. Regulatory approach should include provisions for Utilities to establish net benefits before investments are rate-based