Ontario

LEGISLATION AND REGULATIONS COMMITTEE:
MINISTRY APPROVAL FORM

LRC Tracking #: (e.g. REG-8733, OICNA-11556, DLEG-488)
EVista Tracking #: (e.g. SUB-REG-2009-334)

Ministry of Energy

Overcoming Market Barriers to Energy Storage in Ontario

Regulation

Profile at a Glance

Priority: Key to Commitment
Public Interest: Low
Key Stakeholder Interest: High
New Costs/Burdens: No for Stakeholders; No for Government
New Savings/Opportunities: Yes for Stakeholders; No for Government

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Proposed Items for Review

1. Amending O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998.*

Approvals required prior to LRC

	Committee and date	Cabinet Date
Policy	No approval needed	
TB/MBC	No approval needed	

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Deputy Minister Date

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Minister Date

s. 1 Proposal and Context

- A 2014 report by the Ontario Energy Board's Energy Storage Working Group identified a series of barriers to the integration of energy storage in Ontario. One of those barriers was the application of the Global Adjustment (GA) to certain energy storage facilities. Independent research has also found that the application of GA to energy storage is a significant barrier to their deployment in Ontario.

- The Ministry of Energy (the Ministry) has examined this issue and found that, under certain scenarios, energy storage providers would pay GA for the power used to charge the storage system, and that end-users would also pay GA for the power when it is injected back into the grid. This results in double-counting of GA, and results in unfair treatment of certain energy storage providers that are connected to the grid.

- Accordingly, the Ministry is proposing amendments to O. Reg. 429/04 (Adjustments under Section 25.33 of the Act) made under the *Electricity Act, 1998*. The purpose of these amendments is to define energy storage within the regulation for present and future applications, and change the application of GA for Class B energy storage facilities, the amendments will move the application of GA from a gross consumption to a net consumption basis.

s. 2 Approach and Intended Outcomes

- These regulatory amendments provide a definition for energy storage, and affect the application of GA on a net basis for Class B energy storage facilities. The intention of this amendment is to address market barriers to the fair participation of energy storage in Ontario's electricity markets.

- Energy storage is a unique asset within electricity markets; sometimes it consumes electricity like a load, other times it releases electricity into the grid, like a generator.

- Within the regulation, there are two types of electricity consumers in Ontario: Class A and Class B. Class A entities (generally larger facilities) are charged GA based on their share of provincial demand during the five days during the year when provincial electricity demand is the highest – the five "peaks." Class B entities pay GA rate on a volumetric basis based on a monthly rate.

- Class A energy storage facilities can avoid GA charges by avoiding charging during the provincial peaks. This makes economic sense – charging when market prices are low, and discharging when demand is high. Class B energy storage facilities cannot avoid the GA in this way. Energy storage facilities over 1MW can opt into Class A, but they can also elect to remain Class B.

- Class B facilities are charged on a gross basis and are not reimbursed for GA on electricity discharged into the grid. For example, an energy storage facility may withdraw 1.25MWh of electricity from the grid and reinject 1MWh of that energy. The facility would pay GA on 1.25MW.

- The end user of this electricity also pays GA on their consumption. Using the previous example, the end user would pay GA on 1MWh. This amounts to a "double counting" of the GA on the electricity that an energy storage facility discharges – the GA on that 1MWh is collected twice.

- By charging GA on a net basis, the Ministry recognizes the unique properties of energy storage, while addressing the double counting issue.

- To be eligible for netting of GA, energy storage facilities must be "stand-alone," or "in-front-of-the-meter," not connected to another load. Those facilities connected to a load act like a generator for the purposes of offsetting demand.

- This outcome can only be met through amendments to O. Reg. 429/04, as this regulation defines the applicability of GA to different classes in Ontario's electricity markets.

s. 3 Direction and Urgency

- This proposal arises from the Ministry of Energy's Long-Term Energy Plans. In the 2013 LTEP, the Ministry stated: "The government also intends to initiate work, on a priority basis, to address regulatory barriers that may limit the ability of stored energy resources to compete in Ontario's electricity market. For example, some energy storage applications are currently required to pay various retail, uplift and Global Adjustment charges twice — once when energy is captured and again by the end-user."

- In the 2017 LTEP, the Ministry stated: "The government has now identified these market and regulatory barriers and is updating regulations, including addressing how the GA is charged for storage projects."

- This proposal is part of a broader effort by the Ministry to amend regulations and legislation immediately after the 2017 LTEP to demonstrate progress on key commitments to sector stakeholders.

s. 4 Impact Assessment and Costs

- The Independent Electricity System Operator (IESO) and Ontario Energy Board (OEB) would incur limited administrative costs in updating market rules, processes, and ensuring the infrastructure is in place to charge GA on a net basis.

- These costs would be recovered through existing rates charged to customers during the normal course of business that finance the operation of Ontario's energy sector.

- Cost incurred by local distribution companies (LDC) to provide net billing to an eligible Class B storage facility may be put into existing rates, like most expenditures made by LDCs to facilitate the distribution of electricity. Any expenditure is subject to the Ontario Energy Board's oversight through the rate application process to ensure economic prudence and cost-effectiveness.

- These changes may incent greater participation by energy storage facilities in Ontario's market. As a nascent technology, addressing this and other barriers to energy storage can promote energy innovation and support an emerging industry. However, these changes do not amount to a subsidy of any kind, and the deployment and use of these technologies is expected only if it is demonstrably the more cost-effective solution.

s. 5 Implementation

- The IESO and OEB will be responsible for implementation through changes to processes, codes, and market rules. These changes are expected to be in place for July 1, 2018, the date that the amendments come into force.

- The Ministry does not foresee any risks in implementation.

s. 6 Delivery and Results Tracking

- The Ministry will liaise with its agencies to ensure that the actions required to affect the changes in the regulation are in place for the implementation date.

- The IESO and OEB are responsible for ensuring that energy storage facilities operate in compliance with all applicable regulations, codes, and market rules.

s.7 Stakeholder Consultations

- Energy storage was a theme at the Ministry's innovation table during the open houses held for the 2017 Long-Term Energy Plan consultations. Several hundred people came to the 17 sessions that were held across the province. The Ministry also received thousands of submissions during this consultation period.

- Through this process, the Ministry heard repeatedly that energy storage had a significant role to play in the future of Ontario's electricity sector, and that barriers exist that inhibit the development of this technology in Ontario.

- The Ministry also continues an ongoing dialogue with Energy Storage Canada (ESC, formerly Energy Storage Ontario), the only industry association in Canada that focuses on advancing opportunities and building the market for energy storage. ESC has also identified the application of the GA as a barrier to the adoption of energy storage.

- ESC has expressed support for this initiative after the release of the LTEP, but argue that the changes do not go far enough. ESC advocates the removal of GA entirely from the bills of energy storage facilities, suggesting that these facilities provide far more value to the electricity system.

- The Ministry believes that this approach would be unfair to other electricity market participants, which are required to pay GA on any electricity they consume.

A notice of proposed amendments was posted on the regulatory registry from October 27, 2017 to November 24, 2017.

- Three comments were received through the regulatory registry from ESC, Toronto Hydro, and the Electricity Distributors Association (EDA), while the Electrical Safety Authority (ESA) conveyed feedback through the Ministry of Government and Consumer Services staff.

- Both Toronto Hydro and the (EDA) expressed support for of the proposal.
- Comments from the ESA, ESC, and Toronto Hydro expressed interest in the definition of energy storage. The Ministry has proposed a broad definition of energy storage within the regulation.
- Other comments from the EDAand Toronto Hydro were out of scope; the issues identified are within the purview of the OEB.
- ESC restated its position that energy storage should be exempt from GA entirely.

- The Ministry also consulted with the OEB and the IESO on the impact of the proposed changes and implementation requirements.
- The IESO identified that energy storage facilities require a license to participate in Ontario's bulk electricity market. Licenses are issued by the OEB, however, facilities under 500kW are exempt from obtaining a license. This effectively does not allow for smaller energy storage facilities to participate in IESO markets, and represents a potential barrier to energy storage deployment.
- The Ministry expects the IESO to address this issue as part of its LTEP implementation plan; in the meantime, those facilities under 500kW can benefit from the provisions of this amendment if they remain Class B consumers, or apply for a market rule exemption for the IESO's consideration.

s.8 Other Jurisdictions and Harmonization

- Not applicable

s. 9 Communications

See Appendix A, Communications Snapshot

- The ministry does not plan to proactively communicate on the regulatory amendments. Reactive materials will include updated Q&As, key messages and issues management plan.

- The Ministry proposes to highlight that this amendment, if passed, addresses the double-counting of GA and eliminates an unfair barrier to energy storage in the marketplace without disadvantaging other technologies. This change also reflects the Ministry's commitment to implementing the Long-Term Energy Plan, and its support for innovation in the energy sector.

s. 10 Contacts and Appendices

Contacts

	Name	Phone Number
Ministry Policy/Program	Ryan Zade	416-212-3391
Ministry Legal	Dan Shear	416-325-6685
Ministry Communications	Megan Biggs	416-325-1810
Assistant or Deputy Minister's Office		
Cabinet Office Policy		

Appendices

Appendix A: Communications Snapshot
Appendix B: Draft Regulation
Appendix C: Regulation Comparison Chart