

MEETING NOTE

NAME OF ORGANIZATION: Powin Energy Storage

DATE/TIME OF MEETING: Friday, November 3

LOCATION OF MEETING: TBA

PURPOSE: To tour and learn about Powin Energy's energy storage systems

ATTENDEES: Minister of Energy
Glenn Thibeault

Powin Energy Storage
TBA

ANTICIPATED AGENDA ITEMS:

1. Powin Energy Storage Projects

NOTES ON AGENDA ITEMS:

1. Powin Energy Storage Projects

- Powin Energy is providing energy storage units (batteries) and management software for two projects procured by the Independent Electricity System Operator (IESO) as part of their 50MW procurement.

Suggested Response:

- As you know, Ontario has made a commitment to understanding the potential of energy storage on our grid. Thank you for your contribution to that effort. I am excited to see how these units perform and the value it brings to both the provincial grid and the communities you serve.
- We recently released our Long-Term Energy Plan, which commits to supporting the energy storage community by overcoming barriers to the cost-effective deployment and equitable treatment of these technologies.
- I know that Powin is active in other jurisdictions, like California. Do you have any insights from these markets that you would be willing to share?

Background:

- Powin and Hecate Energy are partnering on six projects as part of the IESO 50MW energy storage procurement. These facilities are contracted to provide reactive support and voltage control to ensure that voltage on the bulk system in the area remains relatively constant and consistent.
- The projects are scheduled to be in service prior to April 1, 2018, in two locations:
 - In Stratford, 20 Powin Energy 2MWh battery arrays will be installed, for total power/energy of 8.8MW/40MWh; and,
 - In Kitchener, six Powin Energy 2 MWh 40-foot outdoor battery energy storage units will be deployed, for a total of 4MW/12MWh.
- As part of the 2017 Long-Term Energy Plan (LTEP), the Ministry has directed to OEB and IESO to identify barriers that disadvantage the deployment of energy storage, and recommend mitigation strategies where they exist.
- The Ministry has also committed to overcoming barriers to grid modernization, including those that affect the use of non-wires solutions like energy storage. Those initiatives are highlighted in the appendix.

KEY FACTS:

- Powin Energy is an Oregon-based company that provides battery energy storage solutions. Among its customers is Southern California Edison, which has purchased a 2MW/9MWh battery energy storage unit.
- Powin is installing the batteries for Hecate Energy, a developer of solar and energy storage solutions. In addition to 12.8 MW/52.8MWh in Ontario, Hecate oversees 16MW of energy storage in in California.

APPENDIX:

1. Item 1 – Background

Powin Energy IESO Projects

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- Powin’s batteries include the “Stack140 modular battery system” which allows for storage units to be stacked in close succession, and the Battery Pack Operating System, which monitors the functioning and the remaining lifespan of the battery.

LTEP 2017: Energy Storage and Grid Modernization

- The Ministry has made a significant commitment to promoting cost-effective energy storage in the 2017 LTEP. The Ministry is proceeding with amendments to the Global Adjustment (GA) regulation to ensure that certain energy storage facilities are only charged GA on what energy they do not return to the grid.
- As part of a broader effort to encourage grid modernization, the Ministry highlighted its expectation that the OEB explore a number of barriers that affect the cost-effective use of energy storage, including:
 - Support for cost-effective distributed energy resources that provide value to customers, like energy storage;
 - A cost-benefit framework that provides clarity on the treatment of investments;
 - Exploring ways for utilities to make use assets like energy storage to participate in market opportunities that would ultimately reduce ratepayer costs; and
 - Finding ways for utilities to partner with their customers to applications like energy storage to address system needs.