

City of Toronto Energy Storage Strategy

Date: August 23, 2017
To: Parks and Environment Committee
From: Chief Corporate Officer
Wards: All

SUMMARY

This report introduces the City of Toronto Energy Storage Strategy that was requested in a report to Parks and Environment Committee in October 2016. In consultation with City stakeholders, this report identifies alignment of energy storage applications with City initiatives.

Energy storage is rapidly developing globally and is the next key technology to enable a low carbon future. Innovation in this sector has enabled the development of reliable and affordable storage systems. Supporting the TransformTO: Climate Action Plan, where technically feasible, energy storage projects will be considered as a low carbon solution to achieve energy savings, provide local grid services, facilitate participation in provincial energy revenue programs and enhance the resilience of City facilities.

The City is collaborating with Toronto Hydro-Electric System Limited, local post-secondary institutions, National Research Council Canada and industry experts to monitor energy storage projects and initiatives. This cooperative approach will allow the City to remain responsive to the progressive nature of the rapidly developing energy storage industry. The City will evaluate the technical and financial viability of energy storage and identify projects related to specific energy initiatives, where appropriate.

RECOMMENDATIONS

The Chief Corporate Officer recommends that:

1. City Council authorize the Director, Environment & Energy Division, to implement the attached Energy Storage Strategy, set out in Attachment 1.
2. City Council direct the Chief Corporate Officer to identify energy storage partnership opportunities, negotiate an agreement and report back to the Parks and Environment Committee to seek approval.

FINANCIAL IMPACT

There is no immediate financial impact resulting from the approval of this report.

Project approval is contingent upon the development of a business case and approval by Committee and Council.

Any future financial impacts identified in the Energy Storage Strategy will form part of a subsequent report to Council and will be included in future Budget submissions for Council consideration.

Capital funding associated with the Energy Storage Strategy initiative will utilize recoverable debt funding.

The Deputy City Manager & Chief Financial Officer has reviewed this report and agrees with the financial impact information.

DECISION HISTORY

At its meeting of November 17, 2016, the Parks and Environment Committee adopted, through item PE15.3, requested the Director, Environment and Energy, to report to the Parks and Environment Committee by the third quarter 2017 on an Energy Storage Strategy for the City that aligns with new and existing City initiatives and investigate the feasibility for partnerships and demonstration projects at City Facilities.

<http://www.toronto.ca/legdocs/mmis/2016/pe/bgrd/backgroundfile-97977.pdf>

At its meeting July 4, 5, & 6 2017 City Council, through item PE19.4 City Council approved the Transform TO Climate Action for a healthy, equitable and prosperous Toronto - Report 2 directed the Chief Corporate Officer to lead cross-corporate implementation of City Council's approved "Leading by Example" Transform TO Report 1 Strategies (Item PE15.1) including The Acceleration of investment in low-carbon technologies and processes across City facilities and operations

<http://www.toronto.ca/legdocs/mmis/2016/pe/bgrd/backgroundfile-98039.pdf>

COMMENTS

City Drivers for Energy Storage

Implementation of energy storage in the City is driven by TransformTO: Climate Action Plan for a healthy, equitable and prosperous Toronto. This is a collaborative project facilitating community engagement to reduce Toronto's greenhouse gas (GHG) emissions by 80% by 2050. To achieve these reductions, TransformTO models included a city wide target of 100 MW of energy storage by 2025, scaling up to 1,000 MW by 2050.

The following strategic objectives were identified as key pieces in the attached Energy Storage Strategy for the City:

- 1) Monitoring energy storage technology and applications
- 2) Establishing partnerships
- 3) Identifying energy storage applications
- 4) Developing projects
- 5) Building the City's energy storage network

See Attachment 1 for the City of Toronto Energy Storage Strategy.

CONTACT

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SIGNATURE

Josie Scioli,
Chief Corporate Officer

ATTACHMENTS

Attachment 1: City of Toronto Energy Storage Strategy