

COMMITTEE OF THE WHOLE – NOVEMBER 26, 2013

DEMAND RESPONSE PROGRAM

Recommendation

The Commissioner of Community Services in consultation with the Director of Building and Facilities and the Manager of Environmental Sustainability recommend:

1. That the City of Vaughan participate in Ontario Power Authority's Demand Response (DR3) program; and,
2. That Staff request proposals from Demand Response Aggregators to provide electricity Demand Response aggregation services in City owned buildings.

Contribution to Sustainability

This report is consistent with the priorities previously set by Council in the *Green Directions Vaughan*, the Community Sustainability Environmental Master Plan:

- Goal 1, Objective 1.1: To reduce greenhouse gas emissions and move toward carbon neutrality for the City of Vaughan's facilities and infrastructure.
- Goal 5, To be leaders in advocacy and education on sustainability issues.

Demonstrating leadership in energy conservation is vital as it raises the importance of how conservation has a direct impact on Climate change a global environmental issue and local air quality.

Economic Impact

There is no upfront cost for engaging an Aggregator and all payments to the Aggregator will be paid by the Ontario Power Authority. Any economic impact which will include revenue to the City as well as potential initiation costs will be reported in a future report detailing the proposals received from Aggregators.

Communications Plan

A separate communications plan is not required at this time. As the specific actions involved with Demand Response are identified and implemented there will be a need to share the impacts such actions may have on stakeholders. In addition, there will be a need to share the successes achieved by participation in the Demand Response Program. In both these instances Corporate Communications will be consulted.

Purpose

The purpose of this report is to seek approval to participate in the Ontario Power Authority Demand Response Program.

Background - Analysis and Options

Up to half of Canada's greenhouse gas (GHG) emissions are under the direct or indirect control or influence of municipal governments Energy consumption from building operations contributes to over 70 % of greenhouse gas emissions generated from City of Vaughan overall operations. Any efforts to lower energy consumption will lead to lower energy costs and a reduced greenhouse gas emission footprint.

The Demand Response 3 (DR3) program was developed by the Ontario Power Authority (OPA) to provide economic incentives for participants to reduce consumption from industrial and commercial enterprises. The program pays participants for turning down their electricity by a specified amount when Ontario's electricity system reaches certain pre-established targets. In exchange for a commitment to reduce load, DR 3 participants receive an availability payment and receive an additional payment for shedding or shifting the agreed-upon load. Demand Response can be met by shedding load through measures such as turning off lights or motors, shifting production to other periods, or drawing electricity supply from an onsite generator provided it has an appropriate certificate of approval from the Ministry of the Environment.

To be eligible the organization must be operating and available during a predefined schedule of about 1,600 hours per calendar year. Within that 1,600-hour period, the City can select to participate in potential activations of up to 100 hours per year.

Communication is a vital component of the DR3 program. In the event of a possible activation to reduce load, program participants receive a standby notice the day before the possible activation. In the event of an actual DR3 activation, the participant will receive an activation notice at least 1.5 hours prior to activation

The primary benefit of participating in the DR3 program is the financial incentive received can be directed to support other energy efficiency projects related to capital or operational improvements. DR3 can be incorporated into the City's energy cost-management strategy in several different ways which will be further explored through discussions and interactions with the aggregator.

An issue that needs to be flagged is the longevity of the OPA DR3 program. The program in its current form is scheduled to continue to 2015 after which it will be reviewed. Leading industry experts anticipate that market conditions and infrastructure constraints will force the continuation of the DR3 program well beyond 2015.

The only way to participate in the DR3 program is through a qualified Demand Response Aggregator who will help the participant understand the risks and rewards of participation, ensure program rules are thoroughly understand and help find opportunities to shed load. The Aggregator would work in partnership with municipal staff to develop a no cost demand response strategy that would minimize impact to operations as well as provide measurement and verification that the demand response is achievable and repeatable. The aggregator would liaise with Ontario Power Authority staff to assist with managing all aspects of the program.

The Town of Newmarket and the Regional Municipality of York have participated in the DR3 program for several years.

Relationship to Vaughan Vision 2020/Strategic Plan

This report is consistent with the priorities previously set out by Council and supports the City's strategic goal of service excellence with the specific objective of leading and promoting environmental sustainability. Exploring the feasibility of participating in an initiative to reduce energy consumption during province wide peak demand periods demonstrates strong environmental leadership to the broader community.

Regional Implications

N/A.

Conclusion

Through a wide range of initiatives, the City of Vaughan has already demonstrated its commitment to sustainability through energy conservation measures. As recommended by Green Directions, Objective 1.1, the City of Vaughan aims *to reduce greenhouse gas emissions and move towards carbon neutrality for the City of Vaughan's facilities and infrastructure*. By committing to explore the feasibility of participating in an initiative to reduce energy consumption during province wide peak demand periods, the City of Vaughan will be able to demonstrate leadership in the community as a strong environmental steward. In addition, the City of Vaughan will be able to determine if participation in the Ontario Power Authority's Demand Response Program has the potential to provide financial incentives for additional energy conservation measures.

Attachments

N/A

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Respectfully submitted,

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