

## **CITY OF VAUGHAN**

### **EXTRACT FROM COUNCIL MEETING MINUTES OF JUNE 24, 2014**

Item 41, Report No. 30, of the Committee of the Whole, which was adopted without amendment by the Council of the City of Vaughan on June 24, 2014.

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#### **ENERGY CONSERVATION DEMAND MANAGEMENT PLAN**

The Committee of the Whole recommends approval of the recommendation contained in the following report of the Commissioner of Strategic and Corporate Services and Manager of Environmental Sustainability, dated June 17, 2014:

##### **Recommendation**

The Commissioner of Strategic and Corporate Services and Manager of Environmental Sustainability, in consultation with the Director of Building and Facilities recommends:

1. That the City of Vaughan approve the Energy Conservation Demand Plan as per the requirement of Ontario Regulation 397/11- Energy Conservation and Management Plans; and
2. That the Environmental Sustainability Office, in partnership with the Building and Facilities Department and Purchasing Services Department, undertake a pre-qualification process for energy performance contract service providers.

##### **Contribution to Sustainability**

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

- Objective 1.1 to reduce greenhouse gas emissions and move towards carbon neutrality for the City of Vaughan's facilities and infrastructure
- Objective 5.1 to share sustainable best practices and ideas between and among municipal staff and the community

##### **Economic Impact**

To be successful, the Energy Conservation and Demand Management Planning process must take into account the City of Vaughan's financial constraints and operational need to continue delivering services. As a result, the initial economic impact of implementing the Energy Conservation and Demand Management Plan will be absorbed in existing budgets where possible. A budget of \$600,000 was established and approved by Council in April 2009 for high priority actions resulting from the energy audit when approval was provided to undertake these audits at major facilities managed by the Building and Facilities department. Should components of the Plan require funding above and beyond existing operational and capital budgets, these components will proceed only when additional external funding resources have been secured. Any proposed capital improvements will be vetted through the regular business planning process.

##### **Communications Plan**

As per Ontario Regulation 397/11, the Energy Conservation and Demand Management Plan will be posted on the City's website by the Environmental Sustainability Office. As implementation of the Energy Conservation and Demand Management Plan continues it would be advantageous to provide progress updates via a News Release and/or other means of communication. The Environmental Sustainability Office would work directly with Corporate Communications staff to determine how best to highlight the implementation progress and achievements. This is consistent with Goal 5 of *Green Directions Vaughan* "To be leaders in advocacy and education on sustainability issues" where "Vaughan is committed to sharing its successes with the community".

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#### Purpose

The purpose of this report is to seek Committee approval of the Energy Conservation Demand Management Plan as required under Ontario Regulation 397/11 and outline an approach to explore energy performance contracts.

#### Background - Analysis and Options

The City of Vaughan is committed to reducing greenhouse gas (GHG) emissions that contribute to climate change and which adversely affect local air quality. To this end, the City of Vaughan joined the Partners for Climate Protection (PCP) program - a voluntary five-milestone framework used to guide municipalities to reduce greenhouse gas emissions. Demonstrating leadership in climate change mitigation at the municipal level is vital as it raises the importance of this global environmental issue within the community and works to encourage local climate action. The Energy Conservation Demand Management Plan focuses on energy use within our community facilities and buildings and complements the Greenhouse Gas Emission Community Action Plan (CAP) approved by Council in April 2014. Completion of the Energy Conservation Demand Management Plan would fulfill the third milestone of the PCP program.

Under the *Ontario Energy Conservation Leadership Act*, municipalities and other public institutions are required to prepare and submit a five year energy management plan to the Ontario Ministry of Energy on July 1, 2104. Energy management plans must include an overview of energy consumption and greenhouse gas emissions for all corporate facilities as well as a description of previous, current and proposed energy conservation projects. Forecasted energy consumption and estimated energy savings must also be reported on an annual basis.

#### Energy Conservation Demand Management Plan

For the City of Vaughan to efficiently meet the legislated requirements of the *Ontario Energy Conservation Leadership Act*, the Environmental Sustainability Office, in coordination with Building and Facilities Department, will develop the initial Plan and prepare an annual report on the City's energy consumption and progress towards energy conservation targets. It will provide a site-by-site breakdown of the energy consumption of every City of Vaughan owned facilities.

**One of the cornerstones of the Energy Conservation Demand Management Plan was the energy audit that was completed in Q4, 2013.** An external auditor compiled a detailed inventory of possible energy efficiency upgrades, including payback scenarios, timelines and associated costs versus savings estimates. The audit documented approximately \$4,000,000 of capital projects resulting in a payback of 6.3 years and an estimated annual savings of 3,798,050 kWh of electricity and 328,410 m<sup>3</sup> of natural gas.

The Energy Conservation Demand Management Plan was developed over a six month period by an internal team of Building & Facilities Department staff and the Environmental Sustainability Office supported by PowerStream's Roving Energy Manager. Highlights of the Plan include developing a reduction objective/target and an outline of 11 actions.

The emissions reduction target is expressed as a percentage reduction below the quantity of emissions released in the baseline year. The City of Vaughan established a corporate greenhouse gas inventory baseline in 2008 and updated it again in 2011. **The internal team has proposed a 10% overall reduction of energy consumption for facilities on per person served basis below the 2011 baseline year by 2020.**

The 11 actions within the Energy Conservation Demand Management Plan (Attachment 1) cover areas such as information systems, energy communications, facility operations, corporate energy conservation culture, demand response and new construction

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#### **Energy Performance Contract**

Energy performance contracting is a mechanism to implement resource efficiency improvements, upgrade facilities and utility infrastructure and reduce operating costs. It uses guaranteed energy and operational savings resulting from the efficiency project to pay for the improvements over time. An energy performance contract is a contract between the energy user and the energy services company for evaluation, recommendation, implementation and measurement/verification of energy efficiency measures.

The Energy Services Association of Canada consists of eight independent energy service companies. These companies represent over 90% of \$450 million per year market for guaranteed energy performance contracts in Canada. Energy performance contracts were a product of the 1980's and were prevalent in federal government, institutional, and health care sectors.

Many municipalities including Newmarket, London, Orangeville, Timmins, Toronto and Windsor have completed energy performance contracts ranging from \$1.2m to \$3.7m predominantly for facility upgrades.

#### **Relationship to Vaughan Vision 2020/Strategic Plan**

This report is consistent with the Vaughan Vision 20/20 strategic goal of providing service excellence to citizens and the strategic objective to lead and promote environmental sustainability. This report is consistent with the priorities previously set by Council and the necessary resources have been allocated and approved. The Energy Conservation Demand Management Plan demonstrates leadership on energy efficiency and climate change while striving to reduce facility operating costs maintain high standards of service delivery.

#### **Regional Implications**

There are no Regional implications resulting from the adoption of this report.

#### **Conclusion**

Energy conservation is increasing in importance with new Provincial regulatory requirements for energy conservation planning and reporting. Energy conservation planning and reporting dovetails well with the actions identified under *Green Directions Vaughan*, the Community Sustainability and Environmental Master Plan, that commit to reducing greenhouse gas emissions from City owned facilities as well as the early efforts on implementing corporate wide energy efficiency initiatives. The Energy Conservation Demand Management Plan, developed by an internal team, targets a 10% overall reduction of energy consumption for facilities on per person served basis below the 2011 baseline year by 2020. The Plan includes eleven core actions in a variety of areas that will be closely monitored through four performance indicators. Energy performance contracting will be further evaluated to determine if the \$4 million of capital improvements, identified in the energy audit could be pursued through this mechanism.

#### **Attachment**

1. Energy Conservation Demand Management Plan

#### **Report prepared by**

Chris Wolnik, Manager, Environmental Sustainability

(A copy of the attachments referred to in the foregoing have been forwarded to each Member of Council and a copy thereof is also on file in the office of the City Clerk.)