

**CITY OF VAUGHAN**

**EXTRACT FROM COUNCIL MEETING MINUTES OF JANUARY 19, 2016**

Item 5, Report No. 1, of the Finance, Administration and Audit Committee, which was adopted, as amended, by the Council of the City of Vaughan on January 19, 2016, as follows:

***By receiving Communication C5 from the Deputy City Manager, Planning and Growth Management, dated January 14, 2016.***

**5                      2016 RENEWAL OF EMBEDDED ENERGY MANAGER POSITION  
                            FOR CITY FACILITIES AND ASSETS**

**The Finance, Administration and Audit Committee recommends approval of the recommendation contained in the following report of the Deputy City Manager, Planning & Growth Management and the Director of Policy Planning & Environmental Sustainability, dated January 11, 2016:**

**Recommendation**

The Deputy City Manager, of Planning & Growth Management and the Director of Policy Planning & Environmental Sustainability, in consultation with the Director of Financial Planning & Development Finance/Deputy City Treasurer and the Manager of Facilities, recommends:

1.        THAT Council endorse the renewal of enrollment in the Embedded Energy Manager Program as a one-year consulting contract in 2016 under the new program structure provided by the Independent Electricity System Operator (IESO) and PowerStream;
2.        THAT the 2016 Capital Budget be amended to include a new capital project for this program, funded 80% from the program and 20% from Gas Tax;
3.        THAT staff be directed to execute the appropriate agreement with PowerStream;
4.        THAT staff be directed to post a Request for Proposals once Council approval and the agreement with PowerStream are secured; and,
5.        THAT the inclusion of this matter on a Public Committee or Council agenda with respect to amending the 2016 Capital Budget to add a project for the Embedded Energy Manager Program be deemed as sufficient notice pursuant to Section 2(1)(c) of By-Law 394-2002.

**Contribution to Sustainability**

The Embedded Energy Manager (EEM) role is directly linked with Green Directions Vaughan Action Item 1.2.5 to encourage local actions to reduce community greenhouse gas reductions. Specifically, the EEM role is an outcome of Council approval of Item 41, Report No. 30 of the June 17, 2014 meeting of the Committee of the Whole regarding Council approval of the Conservation Demand Management Plan on June 24, 2014.

The Embedded Energy Manager role is supported by the Term of Council Priority to "cultivate an environmentally sustainable City", energy conservation objectives in Green Directions Vaughan, and including the City's Community Climate Action Plan and the Clean Air Council Declaration endorsed by Council.

**Economic Impact**

There is no economic impact as a result of renewing the City's enrollment in the Embedded Energy Manager (EEM) Program as 80% will be funded from the IESO as administered by PowerStream, up to a maximum of \$80,000, and 20% up to a maximum of \$20,000 will be funded from Gas Tax. Staff plan to engage a consultant under a one-year consulting contract in 2016 to facilitate the City's on-going energy conservation initiatives and complete provincially legislated reporting requirements.

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It is anticipated that an Additional Resource Request will be submitted in the 2017 budget cycle to extend the role as a full-time contract position for the remainder of the term of the IESO EEM Program from 2017 to 2020.

#### **Communications Plan**

As per Ontario Regulation 397/11, the Energy Conservation and Demand Management Plan is posted on the City's website. The City tracks corporate energy use as one of several sustainability indicators under Green Directions Vaughan, which is available on the City's website as well as the Ministry of Energy website in compliance with Provincial legislation.

#### **Purpose**

The purpose of the report is to obtain Council endorsement of the re-enrollment in the Embedded Energy Manager Program provided by the Independent Electricity System Operator (IESO) and administered by PowerStream.

#### **Background - Analysis and Options**

##### **Embedded Energy Manager Role**

The role of an Embedded Energy Manager (EEM) involves facilitating energy conservation by identifying and implementing various options for saving energy, leading awareness programs, and monitoring energy consumption. As such, EEMs play a critical role in the successful implementation of energy conservation and demand management programs within the industry.

Energy conservation measures must be reported in Quarterly Reports. Quarterly Reports are first submitted to Local Distribution Companies (LDCs) for review and payment purposes and then forwarded to the Technical Reviewer for reporting and technical review purposes.

As part of the Reporting Obligations under the Embedded Energy Manager Agreement V.5.0, all EEMs are required to prepare the following reporting documents:

- EEMs are encouraged to provide the Quarterly Reports as close to the end of each quarter as possible.
- It is recommended that the Quarterly Report be maintained as a living document and used for project tracking purposes, such that it can be provided to the LDC at any time, without need of significant updates.
- An Energy Management Plan (EMP) for each Facility occupied by the Participant, due alongside the second quarterly report.

##### **Embedded Energy Manager as City of Vaughan Sustainability Coordinator-Energy Advisor**

In Q3 2014, the Environmental Sustainability Office (ESO) was successful in securing funding from the Ontario Power Authority's Embedded Energy Manager (EEM) program. The program provides 80% funding support toward remuneration and expenses associated with establishing an energy coordinator/advisor for the City of Vaughan over a one year period. The energy manager activities were incorporated into the Sustainability Coordinator position and extended the current contract position with 80% of the remuneration costs provided by the EEM program and the remaining 20% funded through approved department operating budgets. An Additional Resource Request for 2016 was not submitted during the 2016 budget process as the revised EEM Program details were not available to the City.

Vaughan benefits from the subsidy in implementing the Energy Conservation Demand Management Plan (CDM), required under Ontario Regulation 397/11, and endorsed by Council

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on June 24, 2014. The CDM Plan is targeting a 10% reduction in the annual \$4.8M utility costs within Building and Facilities over a five year timeframe. As the City achieves energy reduction targets, it is anticipated that savings in utility costs could be used to off-set the salary and benefits of converting the EEM role to a full time position.

#### Progress to Date

In 2013, an external auditor compiled a detailed inventory of possible energy efficiency upgrades, including payback scenarios, timelines and associated costs versus savings estimates for 15 of the City's most significant buildings. The audit recommended \$3,798,050 of capital projects resulting in an average payback of 6.3 years and an estimated annual savings of 335 kWh of electricity and 328,410 cubic metres of natural gas. The Energy Conservation Demand Management Plan was developed over a six month period by an internal team of staff in Building & Facilities and Environmental Sustainability supported by PowerStream's Roving Energy Manager. Highlights of the Plan include developing a reduction objective/target and an outline of 11 actions. 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 recommended energy conservation actions and the audit summary is available as Attachment 1.

#### Revised EEM Program

The current EEM Program concludes December 31, 2015. The new EEM Program, which is to extend from 2016 to December 31, 2020, offers the option of a salary-based incentive structure or a performance-based option to provide funding for the EEM position. Both options can be implemented as a staff position or consulting contract on a full-time basis. The City is selecting the salary-based option for 2016 as a consulting contract, with the option to move to a performance-based structure and/or staff position in later years. PowerStream is currently preparing Contract/Participant Agreements under the new EEM Program.

Under the salary-based structure, 80% of eligible funding is provided by PowerStream up to a maximum of \$80,000 per year. The energy savings target is 2,000 MWh per year. Under the salary-based option, \$40,000 (50%) is due 60 days from the start of the position. Reconciliation at year end is based on outcomes recorded in quarterly reports and bi-annual energy management plan. Energy savings targets not met may be rolled into targets for following years. The performance-based option provides \$40/MWh of gross verified energy savings up to a maximum of \$150,000 per year.

For 2017 to December 31, 2020, it is anticipated that staff will submit an Additional Resource Request for the EEM as a staff contract. It will be decided through 2016 in partnership with PowerStream whether it is maintained as a salary-based role or moved to the performance-based structure.

#### Deliverables of the EEM Consulting Contract

A Request for Proposals (RFP) will be issued once Council approval and the agreement with PowerStream are secured. The RFP will include, but not be limited to, the following deliverables:

- Assess the current baseline information and monitoring systems;
- Identify gaps and weaknesses, also in consideration of the City's five year energy management plan (Conservation Demand Management Plan) filed in accordance with the *Ontario Energy Conservation Leadership Act*;
- Identify ways of achieving efficiencies and maintaining accurate and timely records and reporting;

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- Recommend an auditing strategy, scalable to accommodate future growth, that would include the necessary technology and system upgrades to make efficient monitoring possible;
- Identify costs;
- Meet all reporting requirements of the EEM Program; and
- Recommend an implementation strategy.

#### **Relationship to Term of Council Service Excellence Strategy Map (2014-2018)**

The Embedded Energy Manager role is supported by the Term of Council Priority to "cultivate an environmentally sustainable City".

#### **Regional Implications**

There are no regional implications by participating in the subsidy program provided by the Province.

#### **Conclusion**

The Embedded Energy Manager (EEM) Program provides a significant contribution to the City's efforts to save costs of operating and maintaining City assets and to reduce greenhouse gas emissions by reducing energy use. The role of the EEM is directly supported by specific action items in Green Directions Vaughan and more generally by the Term of Council Priority to "cultivate an environmentally sustainable City".

#### **Attachments**

1. Energy Efficiency Audit Summary from the Energy Conservation Demand Management Plan.
2. Energy Conservation and Demand Management Plan, June 2014

#### **Report prepared by:**

Elizabeth Linley, Sustainability Coordinator-Energy Advisor,  
Policy Planning & Environmental Sustainability  
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Policy Planning & Environmental Sustainability  
Dave Merriman, Manager of Facilities, Buildings & Facilities

(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.)