



Town of
East Gwillimbury



GREEN FACILITY FORMULA

TOWN OF EAST GWILLIMBURY FACILITY CONSERVATION & DEMAND MANAGEMENT PLAN



June 2014

The Green Facility Formula:

Green Measures (Behaviour)
+ Green Capital Planning (Green Technology)
= Conservation + Cleaner Environment

Think Green and Act Green

The Town of East Gwillimbury fosters a Think Green Act Green environment. By incorporating green technology into the replacement of facility infrastructure the Town conserves energy and precious municipal resources that ultimately creates a lasting impact and a cleaner environment. The Town of East Gwillimbury Green Facility Formula is a sequence of actions that demonstrates our commitment to the environment and thinking and acting green.

Green Energy Act Regulation 397/11

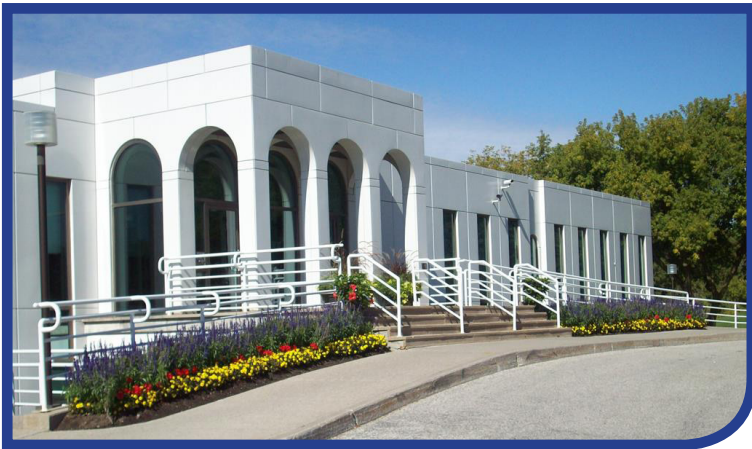
The Provincial Government has committed to help public agencies understand and better manage their energy consumption. As a part of this commitment, Ontario Regulation 397/11 under the Green Energy Act 2009 requires public agencies to report their energy consumption and Green House Gas (GHG) emissions on an annual basis and implement a Conservation and Demand Management Plan.

Requirements of a Conservation and Demand Management Plan

The following are requirements under the Conservation and Demand Management Plan:

- Annual facility energy consumption (cubic meters of gas consumed and kWh of electricity consumed)
- Annual tonnes of GHG emissions
- Goals and objectives for conserving and reducing consumption and managing demand for energy
- Proposed measures, cost savings estimates and estimated length of time the measures will be in place
- A description of renewable energy
- Confirmation that senior management for the agency has approved the plan



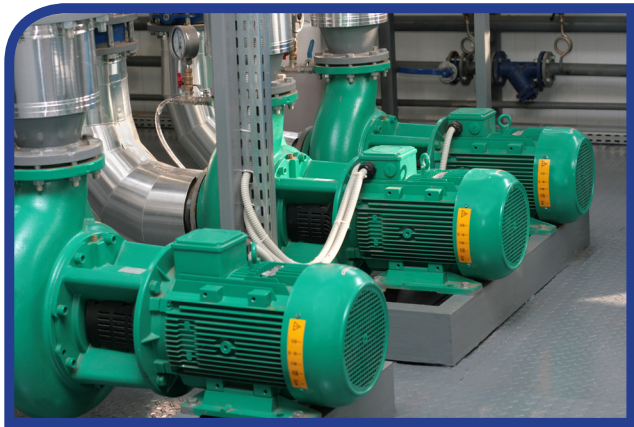


Champions for the Plan

Every plan needs a champion or an advocate. At East Gwillimbury the Green Facility Formula is implemented by a team of Champions including but not limited to our residents, businesses, stakeholders, community groups, facility users, front line and management staff. Staff at the Town of East Gwillimbury are committed to conserving energy and improving the environment.

The Numbers: Energy Consumption Data




Annual facility consumption data and GHG emissions can be accessed via the Town of East Gwillimbury website at www.eastgwillimbury.ca.



Energy efficient plant technology

Measurable and Attainable: Goals, Objectives and Measures

Employing green thinking and green facility technology and measures assists with meeting our high level goals and specific objectives under the Green Facility Formula. A summary of the program goals and specific examples of measureable and attainable objectives is provided within this document. Also included are proposed measures, cost savings and potential payback period approach, and an estimated duration of time the measure may be in place. Measures may be defined in three different sub-categories including:

-  **Behavioural** Reminding staff to shut-off lights
-  **Organizational** When building new facilities consider building to an elevated environmental standard
-  **Technical** Installing motion sensor light switches in an effort to conserve energy



Motion sensor light switches

The Green Facility Formula: Moving from Theory into Practice

A Time for Action: Plan Implementation

After the plan has been developed an implementation strategy must be developed including a statement of goals, objectives and measures prioritizing measures, assigning timelines and responsibilities and a link to other corporate initiatives.



Let's Get Started: Statment of Goals, Objectives and Measures

The following is a statement of the goals and objectives and measures to be under the Green Facility Formula:

Green Operations

Goal: Maintain total energy consumption and GHG emissions profile during an aggressive period of growth and development.

Objective: Maintain hydro and gas energy consumption profiles while resident and business occupancy develops over the next five years and facility use, programs and permits in municipal facilities increases.

Behavioural Measures: Continue with and develop procedures that foster green operations. Such as, turning off lights when not in use and setting-back HVAC systems where possible.

Technical Measure: When replacing mechanical and electrical systems replace the system with an environmentally friendly green technology where possible. For example: light switch replacement with a motion sensor, thermostat replacement with a programmable or automated device, incandescent light replacement with a compact florescent or LED light.



LED lights

Green Technology

Goal: On a per case basis align annual facility capital repair and replacement projects with green facility technology options.

Objective: Decrease energy consumption and develop an economically responsible pay-back period for the green technology employed.

Technical Measure: Investigate green facility technology options for any capital replacement of structural (building envelope), mechanical and electrical building systems including a simple payback period for the technology investment.

Engagement

Goal: Engage staff and the public on ways and methods to reduce energy consumption and decrease our carbon footprint.

Objective: Communicate to the public methods to reduce consumption by using green technology or operations.

Behavioural Measure: Post quarterly updates on the Town's website about green initiatives being undertaken in-line with the Conservation and Demand Management Plan. Include tips for the public on energy conservation and demand management.



Solar panels

Renewables

Goal: Identify renewable energy options for future capital projects.

Objective: Production of Kwh of electrical consumption or cubic metres of gas reduction due to renewable heat source.

Technical Measure: Perform a Solar PV and Renewable audit of existing facilities. Identify opportunities for possible Feed In Tarrif (FIT), Micro FIT or renewable or re-claim projects within Town.



Plan Implementation and Timing:

The following is a prioritization of the measures, timelines and assignment of responsibilities:

Measure	Priority	Timelines	Responsibilities
Maintain Consumption Profile	1	2015	Facility Assets & Programs
Green Capital Upgrades	2	2015 -18 Budget Deliberations	Facility Assets & Programs
Public Communication & Staff Engagement	3	2015	Facility Assets & Programs, Corporate Communications
Renewable Energy Analysis	4	2015	Facility Assets & Programs



Energy efficient automated controls



High efficiency boilers

Renewable Energy Beyond Conservation

The Conservation and Demand Management Plan requires each municipality to report out renewable energy generation and the amount of energy produced on an annual basis including and not limited to: geothermal, heat pump, solar photovoltaic and thermal air technologies.

The Green Facility Formula provides a plan to review and potentially develop renewable energy options in the Town of East Gwillimbury.

Link to the Town of East Gwillimbury Strategic Plan

The Green Facility Formula supports the Strategic Pillars for the Town of East Gwillimbury

- Providing and advocating for quality programs and services to the community
- Managing growth to ensure a sustainable community
- Supporting a municipal organization focused on excellence



For more information contact:

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