

● 360 Energy Case Study - Sustainable Energy Planning

Greenest Town in Ontario



The Town of Caledon, located in the Region of Peel just north of Brampton, prides itself on being the “Greenest Town in Ontario”. Its goal is to provide a “safe, green community of communities; desiring a sustainable future by managing and fostering community progress while respecting its heritage.” It has implemented measures that have reduced the energy consumption and costs for the town.

Challenge

Caledon had started on energy improvements and has taken initial steps towards energy efficiency. Being a progressive municipality, the Town of Caledon knew there was more that could be done.

With the approval of the Ontario Green Energy and Green Economy Act, any municipality could be required by the government to embark on or prove the existence of an energy plan. Caledon recognized the need to enhance their current strategy in order to meet these requirements. This also assisted the Town in moving toward its quality, climate change mitigation, and sustainability goals. The key to meeting these goals was to develop a plan that would ensure acceptance from the employees of the Town.

Solution

The Town of Caledon researched a variety of resources in the market place to assist with their energy plan. Options included having a plan written for them or using a pre-existing energy plan template. However, they wanted something that would drive internal and external resources to provide input into the development of the plan and to support and approve energy management activity when the plan was completed. This led them to work with 360 Energy Inc.

The first step was to ensure the energy team knew the Town’s current status regarding energy management and where energy was being consumed. They developed a baseline of energy consumption by location and utility. The Town went with a three-pronged approach to energy management which encouraged the elimination of waste, maximizing efficiency, and optimizing energy supply. The Town of Caledon’s next step will be to produce a database of energy consumption and cost. This database will allow the Town to monitor the data for variations, provide facility evaluations, highlight areas of possible improvement, and provide energy information for reviews.

Industry: Municipality

Population: 57,050

Energy Champion: Jeremy Schembri

360 Program Adopted: Sustainable Energy Planning

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On the technical side, the Town of Caledon also worked with 360 Energy in developing a plan to implement new lighting at facilities, a new street light pilot program, daylight sensor controls, waste heat recovery projects, and the generation of solar energy.

In the facilities, a waste heat recovery project will capture heat from equipment and discharged water and reuse it, rather than procuring new energy to meet their needs. Daylight sensor controls, implemented in 2012, will reduce the use of electricity by assessing the amount of natural light in the building and using it instead of additional lighting. Solar photovoltaic MicroFIT projects will be used to generate electricity with the intent of reducing greenhouse gas emissions. It is estimated that this project will generate \$20,000 annually. 360 Energy discussed the importance of involving the utilities and capitalizing on incentives and grants. As a result, the Town of Caledon has already received funding from their local utilities to support the MicroFIT project.

In addition to these projects, 360 Energy identified a number of processes for the maintenance and upkeep of public buildings within the Town of Caledon. Procedures for shutdown will be developed so that the buildings will not use as much energy during off-peak hours when they are not in use. Additionally, software for energy tracking and billing verification was encouraged, as a method of ensuring correct billing, thus avoiding overpayment. An incentive program will be developed by 2012 as a method of encouraging a competitive environment to bring about conservation among facilities and individuals within the organization. Finally, facility managers will receive energy management training and an intradepartmental energy management team will be created to ensure good energy management throughout the organization.

360's Professional Expertise

360 Energy Inc. has a proven process that qualifies, educates and supports organizations in developing an energy plan that is best suited to an organization's specific needs – an approach that has fit the requirements of the Town of Caledon very well. This process ensures energy management will be integrated throughout the organization and encompasses a variety of activities from data management and supply management to energy usage, energy efficiency, etc. The savings that result will be able to be reinvested in future projects and ensure the sustainability of the Town of Caledon's energy management program.

"With five distinct energy management goals, Caledon's Corporate Energy Management Plan not only illustrates the town's commitment to remain on the forefront of energy management, but also provides a solid framework to achieve our mandate of reducing waste, maximizing efficiencies and generating clean energy,"

- Marolyn Morrison, Mayor of Caledon