

## Theme: Energy



Solar panels at the Camp Kawartha Environment Centre.

### Where Are We Now?

Energy is a critical component of the quality of life we enjoy today. It also contributes to our local economy as Peterborough's larger businesses are significant manufacturers of energy products. With increasing concerns over energy consumption, climate change and resource depletion, more and more people are taking a second look at how we produce and consume energy.

The Greater Peterborough Area has begun a transition to a community that utilizes more environmentally and climate-friendly forms of energy production. For example, Peterborough Utilities Inc., wholly owned by the City of Peterborough, is a provincial leader in renewable energy generation with 18 megawatts of hydroelectric and 10 megawatts of solar power in its portfolio. The Townships of Douro-Dummer and Smith-Ennismore-Lakefield are also exploring options for generating solar energy. In addition, many private landowners in the Greater Peterborough Area have taken advantage of Ontario's Feed-in Tariff program, with small arrays of solar panels becoming an increasingly common sight in the region. Indeed, long known as the 'Electric City', the City of Peterborough and its surrounding communities are again becoming leaders in electricity production.

However, conserving energy is just as important as changing the way we produce energy. While our community is taking great steps in changing the way we produce energy, we still have much work to do to address how we use energy. Components of this theme will help to address the Greater Peterborough Area's energy consumption, in an effort to minimize the amount of energy we use.

## Where Do We Want to Be in 25 Years?

**Our Goal:** We will minimize the amount of energy we use and maximize the production of local, dependable sources of renewable energy.

## How Are We Going to Get There?

By following our *Strategic Directions*:

- Reduce our reliance on fossil fuels through conservation and the use of alternative energy sources.
- Ensure efficient energy use in buildings.
- Lead the way in the development and use of renewable energy technologies.

### Priority Actions

- Develop *community energy plans* in each of the Greater Peterborough Area's member communities, coordinated at a regional level.
- Establish energy efficiency standards for all new development which would consider LEED certification in all new construction and for renovations.

*Note:* Greater details of the *Priority Actions* are outlined in Appendix A. Additional short- and long-term Actions are offered in the List of Potential Initiatives (Appendix B).

## Toolbox Resources

- **Municipal Energy Efficiency Planning Workbook** – Cut energy use within your own facilities by completing an energy audit and implementing the findings.
- **Aboriginal Renewable Energy Network** – Develop renewable energy generation facilities in your First Nations community.
- **Save ON Energy** – Implement strategies and solutions to reduce your business' energy use.
- **100 Ways to Save Energy** – Lower your personal energy use by implementing simple and potentially low cost ideas.

## Sustainability in Action

- The Township of Douro-Dummer has applied for two microFIT solar contracts (one rooftop and one ground-mounted) and hopes to have these installed in 2012.
- The City of Peterborough, in partnership with Peterborough Utilities Inc., has approved the installation of a pilot rooftop solar energy project on the roof of the Kinsmen Civic Centre. The City has also approved, in principle, that all new and replacement roofs on city-owned buildings deemed suitable for solar power installations be constructed to accommodate rooftop solar systems.
- In partnership with Enbridge, Peterborough Green-Up is delivering the Enbridge Gas Distribution Home Weatherization Program locally. The program, designed to help those in financial need save on home heating costs, pays for costs associated with home improvements like increased insulation and draft proofing.
- The City of Peterborough conducted energy audits for City facilities in 2010, and has been converting street and facility lighting to be more energy efficient.

## THEME: ENERGY (A)

### Goal

We will minimize the amount of energy we use and maximize the production of local, dependable sources of renewable energy.

### Strategic Direction Supported

Lead the way in the use and development of renewable energy technologies.

### Priority Actions

Develop *community energy plans* in each of the Greater Peterborough Area's member communities, coordinated at a regional level.

### Description

A broad recognition now exists that the dual challenges of resource depletion and climate change are necessitating a shift from fossil fuel-dependent electricity generation to emission-free, renewable energy. Increasingly, communities are looking internally to address these challenges, rather than waiting for senior levels of government to take action. The City of Guelph, for example, is now widely recognized for the development of its Community Energy Plan. Undertaking such a planning process begins to bring to the fore the many challenges associated with energy generation and energy use, and starts the conversion on addressing these issues with unique, community-based solutions. Indeed, through the development of *community energy plans* – incorporating energy conservation, management of demand for energy, and planning for renewable energy generation – for each of municipalities and First Nations, the Greater Peterborough Area is well positioned to become a leader in the use and development of renewable energy technologies.

Results from this action will support *Strategic Directions* under the following additional *Themes*:

- Climate Change
- Natural Assets
- Economic Development & Employment
- Healthy Communities

### Activities

- Establish an Energy Working Group to consisting of key stakeholders, including representation from each of the municipalities and First Nations
- Assess the current energy reality in each of the municipalities and First Nations
- Engage stakeholders and the broader community in discussions
- Develop *community energy plans*
- Implement *community energy plans*

## Toolbox Resources

- **Developing A Community Energy Plan** – Tools, examples and case studies of community energy planning
- **Municipal Energy Efficiency Planning Workbook** – Cut energy use within your own facilities by completing an energy audit and implementing the findings
- **Aboriginal Renewable Energy Network** – Develop renewable energy generation facilities in your First Nations community
- **Energy Management & Greenhouse Gas Reduction Program** – Develop and implement a program to track, manage and reduce your energy use and related greenhouse gas emissions

## Potential Lead and Coordination

- Energy Working Group (as a coordinating body for City, County, Townships, First Nations)

## Potential Partners

- City of Peterborough
- County of Peterborough
- First Nations
- GE Hitachi
- Hydro One
- Ontario Power Authority
- Ontario Power Generation
- Ontario Sustainable Energy Association
- Peterborough Utilities Inc.
- Local renewable energy companies
- MUSH sector
- Peterborough Green-Up
- Townships
- Transition Town Peterborough

## Measures of Success

- Policies in place to support renewable energy generation in existing and new buildings
- Number of renewable energy installations
- Kilowatts of installed renewable energy capacity
- Number of new jobs in the renewable energy and energy efficiency sector locally

## THEME: ENERGY (B)

### Goal

We will minimize the amount of energy we use and maximize the production of local, dependable sources of renewable energy.

### Strategic Direction Supported

Ensure efficient energy use in buildings.

### Priority Action

Establish energy efficiency standards for all new development which would consider LEED certification in all new construction and for renovations.

### Description

According to the National Research Council of Canada, on a per capita basis, Canadians use four times more energy than the world average. Accordingly, energy conservation, along with transitioning to a renewable energy supply, represents a significant component of becoming a sustainable community. This proposed action will allow us to decrease our energy use and become a leading example in energy conservation and efficiency.

Results from this action will support *Strategic Directions* under the following additional *Themes*:

- Climate Change
- Natural Assets
- Economic Development & Employment

### Activities

- Develop a local standard for energy efficiency and net energy consumption in new buildings
- Investigate the possibility of financial incentives, such as the Planning Act's *Community Improvement Plan* grant process, for developments that meet certain efficiency standards
- Strengthen MUSH sector linkages in terms of energy conservation

### Toolbox Resources

- **Develop Green Building/Development Standards** – Develop and implement a set of local green building and development standards to encourage more energy efficient development
- **More Energy Efficient Development** – Encourage energy consumption in new buildings implementing higher minimum standards for energy efficiency
- **Save ON Energy**– Implement strategies and solutions to reduce your business' energy use
- **100 Ways to Save Energy**– Lower your personal energy use by implementing simple and potentially low cost ideas

## Potential Lead and Coordination

- Joint City of Peterborough and County of Peterborough

## Potential Partners

- First Nations
- Fleming College
- Local businesses
- MUSH sector
- Ontario Power Authority
- Peterborough Green-Up
- Peterborough Kawartha Home Builder Association
- Peterborough Utilities Inc.
- Townships
- Trent University

## Measures of Success

- Total kWh of electricity conservation
- m<sup>3</sup> of natural gas conservation (if applicable)
- Oil/propane consumption for heating (if applicable)
- Percentage of buildings achieving a high standard of energy efficiency
- Number of LEED certified buildings