

Peel Region Official Plan Update Stakeholder Consultations and Workshop

Energy Workshop Summary Report
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H A R D Y
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1.0 Purpose and Background

1.1 Peel Region Official Plan Review

The Region of Peel is currently undertaking a review of its Official Plan. The Regional Official Plan (ROP) lays out the policy framework for decision making by Regional Council. Every five years, the Official Plan is reviewed to ensure that it reflects the changing needs of the community, and to conform to Provincial policy and legislation, including: Ontario's *Planning Act*; the *Provincial Policy Statement*; *Places to Grow Act* and; the *Growth Plan for the Greater Golden Horseshoe*.

The update will focus on fifteen areas (diagram found in Appendix 2: Welcome Presentation, pg. 6); energy being one of them. Energy supply, conservation, demand and consumption have increasingly become an aspect of sound land-use planning. This is especially important in Peel Region due to significant population and employment growth, which is forecasted between now and 2031.

The ROP must conform to the Provincial Policy Statement, 2005 and the Growth Plan for the Greater Golden Horseshoe, 2006 – specifically Section 4.2.4, which states:

Municipalities will develop OP policies and other strategies to support energy conservation including: a) conservation for municipally owned facilities; b) identifying opportunities for alternative energy generation and distribution; c) energy demand management to reduce consumption; d) land use patterns and urban design to encourage energy efficiency

According to the *Growth Plan for the Greater Golden Horseshoe*, Peel Region is anticipated to grow in population by 31% and in employment by 64% by the year 2031, which will create significant demand for energy and an increased need for energy conservation. By planning for our projected needs and changes, the Region will be better able to service the needs of residents, while creating a sustainable future.

The plans that are laid out in the ROP, will guide energy infrastructure development and sustainable conservation measures.

1.2 Purpose of the Workshop

The purpose of the Energy workshop was to examine potential energy policies that can be considered for the Official Plan so as to promote efficient, energy generation, alternative energy systems, energy conservation and improved air quality through land use and development patterns.

Stakeholders were consulted on the best ways to achieve goals and were asked to provide their insight into how energy can be planned through the Official Plan. The goal of the workshop was to generate debate on energy options in a rapidly changing environment.

2.0 Summary of Event:

The event took place at the Brae Ben Golf Club, 5700 Terry Fox Way in Mississauga on Monday January 28th from 1:00 PM – 4:00 PM. In all 64 participants were in attendance, including six invited panelists who presented various perspectives about energy and participated in a panel discussion. Two Peel Region staff note takers were in attendance to record the discussion, plus an audio technician from Peel Region to record the comments. A full list of participants can be found in Appendix 1.

Participants were seated at tables at 1:00 PM and were welcomed by Arvin Prasad, Director of Planning Policy and Research Division, Environment, Transportation and Planning Services for the Region of Peel. A copy of his presentation can be found in Appendix 2.

Dave Hardy from Hardy Stevenson and Associates Limited introduced himself as the moderator, introduced the presenters and explained to the participants how the afternoon would work. The presenters would each give a summary presentation, followed by a break and then the floor would be open to questions and answers from the audience plus a moderated discussion with the panelists.

After a break, panelists were asked a set of questions by Dave Hardy, and the audience. A summary of the themes, ideas, questions and responses can be found below. A list of questions for the panelists can be found in Appendix 3.

2.1 Keynote Speaker

2.1.1. Eva Ligeti : Clean Air Partnership

Eva Ligeti from Clean Air Partnership (CAP) was the key-note speaker for the afternoon. Her presentation focused on energy consumption and its impacts on climate change and the need for policy direction. The presentation touched on how our built environment has impacts on health and how sprawling and fragmented communities have fostered car dependency, inactivity, obesity, loneliness, fossil fuel and resource consumption, and environmental pollution.

Eva Ligeti is the Executive Director of the Clean Air Partnership and co-chair of the GTA Clean Air Council. Eva directs research and social marketing with a focus on urban air quality and climate change mitigation and adaptation for cities.

An adjunct professor at the University of Toronto, Graduate Program in Environmental Science, she teaches environmental law. Ms. Ligeti serves on numerous boards and committees including, Federation of Canadian Municipalities' Green Municipal Fund's Council, Brantford Power Inc. and the Advisory Council of the Nuclear Waste Management Organization. She is a member of the Province of Ontario's Expert Panel on Climate Change Adaptation.

Her presentation highlighted the need for immediate action to be taken to help reduce carbon emissions and reduce the impacts of climate change and global warming. She stressed that although climate change and energy are global issues, there is a need to make changes locally and make connections with other Regional and Municipal governments in the area to enact strong measures and policies.

Finally, Ms Ligeti raised issues of the need for more research and studies to be conducted into how environmental issues are impacting the health of citizen's and residents of Peel Region and the rest of the GTA.

Her recommendations included a need for strong governments and strong policies – that citizen's cannot be expected to make the necessary changes they need to without the help of governments.

Her presentation can be found in Appendix 4.

2.2 Panelist Presentations

2.2.1. John Jeza: Ontario Power Authority (OPA)

John Jeza, Director, Channel Development for Ontario Power Authority presented on the role of the OPA and the intersection between Municipal and energy planning.

The OPA's role is to forecast the adequacy and reliability of electricity resources for the medium and long term; conduct independent planning for conservation, generation and transmission; develop integrated power system plans for Ontario; and engage in activities in support of the goal of ensuring adequate, reliable and secure electricity supply and resources in Ontario.

The OPA is involved in a large energy conservation program that will help reduce some of the energy needs of Ontarians.

It is important to understand the intersection between provincial and municipal energy planning. Mr. Jeza pointed to municipalities having a role in addressing energy supply and demand in terms of land use and built form. Municipalities have a role in assisting people to conserve energy. Municipalities will also need to protect corridors for future energy infrastructure development.

The municipality also has a role in helping people make more energy efficient choices by implementing standards such as *Leadership in Energy and Environmental Design* (LEED) and others to help residents use less energy.

2.2.2. Gary Wilde: Peel Corporate Energy

Gary Wilde, P.Eng., PMP, Project Manager for the Region of Peel presented on key issues that will effect energy and humanity in the next 25 years, including climate change; peak oil¹; energy stress; and economic stress.

He stated that municipal plans should include emergency management plans for peak oil and energy management plans.

He stressed the importance of planning for life-cycle costing, and for planning for fossil-fuel free communities to encourage renewable energy options.

2.2.3. John Stillich: Sustainable Urban Development Association

John Stillich, Director and General Manager of the Sustainable Urban Development Association presented on the need for sustainable community development to best tackle upcoming energy shortages and crises.

He spoke on the challenges of peak oil and research that predicts we will have significant shortages of fossil fuels sometime between 2010-2015. The implications will be soaring costs of energy; high demand for alternative transportation; and hardship for businesses and households.

He stated that policy choices now will help to alleviate many of the issues the decline of fossil fuels could bring. Good policy choices will also help in reducing green house gas emissions which may help reduce the impact of climate change.

¹ **Peak oil** is the point in time when the maximum rate of global petroleum production is reached, after which the rate of production enters its decline.

He emphasized that by implementing sustainable urban development we can achieve the following:

- Exposure to energy shocks is reduced
- Traffic congestion is reduced
- Household & local finances improve
- Air and water are cleaner; healthier
- Communities are safer and more vibrant
- Stronger economy
- Food security improves

By enforcing better building design and better use of greenfield development through policies and legislation, it may be possible to lessen the dependency on oil.

He concluded that implementing policies now will help with future energy demands.

2.2.4. Glenn Miller: Canadian Urban Institute

Glenn Miller, FCIP, RPP, Director of Education and Research Canadian Urban Institute's presentation highlighted the need for integrated energy planning. He explained three things have changed in recent years that alter formerly safe assumptions:

- Availability of power
- Affordability
- Alternative and renewable energy – now a serious contender for investment

Integrated energy planning is a way for municipalities to influence their own destiny. It helps create a vision; engages the key players in a community and helps set key goals and targets that can be achieved through an integrated plan.

He also spoke of the role of district energy which is a method of providing heating, cooling and electricity from a central plant to residential, institutional, commercial, individual and municipal customers.

District energy systems (DES) provide:

- Generation of thermal energy and electricity
- Distribution of the thermal energy from plant sites
- Transfer of thermal energy to the end user

DES can help reduce peak demand, reduce carbon emissions and help support compact urban form.

He concluded that by bringing district energy into a municipality it is possible to help create employment, stimulate intensification and provide a catalyst for a comprehensive approach to integrated design and development.

2.2.5. John Sabiston: Hydro One Networks

John Sabiston, P.Eng. Transmission Planning Manager for Hydro One Networks presented information about infrastructure needs for municipalities.

He pointed out that communities will continue to require a reliable supply of electricity to meet peak demand.

Mr. Sabiston emphasized the fact that electrical infrastructure requires continuous corridors of land, and that in order to serve residents, municipalities need to protect corridors for future energy transmission lines from the ongoing pressures of urban development before it is too late.

The panelist's presentations can be found in Appendix 4. Bios of the panelists can be found in Appendix 5.

2.3 Closing

David Wright wrapped up the session with a thank you to the panelists and participants and he provided a quick overview of how they are going to use the information (found in section 4.0).

3.0 Questions, Themes, Ideas and Outcomes: Summary

3.1 Major Themes:

- Public awareness
- Building Complete Communities
- The Newburg Concept²
- Peak oil
- Wind power in Peel
- Movement of bulk energy
- LEED as a standard for municipalities
- Green development incentives
- Infrastructure to support reduced energy consumption
- Encouraging localized/district energy
- Brownfield redevelopment to help meet intensification targets

² Preliminary work by John Stillich on the Udonia Concept (also known as the Newburg concept) for greenfield development indicates that 8,000 residents and 4,000 jobs can be accommodated per square kilometer (20,000 residents and 10,000 jobs per square mile) in a safe and desirable manner on a large scale. The concept includes allowance for a full range of residential, nonresidential and public uses that comprise complete communities: From: <http://www.udonialife.citymax.com/page/page/4596747.htm>

3.2 **Policy/Legislation References:**

- Places to Grow, Bill 51, Planning Act

3.3 **Questions:**

There is rapid urban growth occurring in Peel. How can Regional corporate programs and land-use planning reduce energy consumption?

- Potential to contribute to sustainability by retrofitting buildings
- Infrastructure is needed to support activities such as walking/cycling and to encourage public transit (rail/light rapid transit) rather than building infrastructure that only encourages automobile use
- Need leadership at the local level

How can the Urban Heat Island effect be addressed?

- An **urban heat island (UHI)** is a metropolitan area which is significantly warmer than its surroundings. The main cause of the urban heat island is modification of the land surface by urban development; waste heat generated by energy usage is a secondary contributor³.
- There are many ways to reduce the impacts of the urban heat island such as green roofs/vertical green walls and permeable paving
- The Clean Air Partnership (CAP) is working to create a guide for planning in order to deal with hot spots
- Remote sensing data will help to demonstrate the geographic proximity required in order to be impacted by hot spots
- Satellite mapping will be used to identify ground temperatures next summer

How does the Region match policy with practice in order to get things moving? Should we use incentives? What legislative tools should be utilized?

- Use a mix of programs including incentives, awareness and regulation
- Awareness alone is not enough, but it is very important for communities to be aware of what municipalities are working on
- CAP and Natural Resources Canada (NRCAN) are producing an animation similar to SimCity that will illustrate what downtown Brampton might look like after a climate event; the public responds to this sort of application
- Incentives such as the City of Toronto's Green Roofs program, free parking for hybrid vehicles, rezoning parking lots for infill, increasing parking fees, etc.
- Employ "energy first planning"
- A bridge needs to be built between policy intentions and reality
- Wind farm usage can be supported through the creation of by-laws

³ Source: Wikipedia, accessed on March 27, 2008.

Do people truly understand the idea of “peak oil”?

- Need to plan and prepare for the end of cheap oil
- Alternative energy sources are needed
- Integrated energy planning should be employed
- Reduce reliance on the grid and harness energy from waste
- District energy can be used to reduce greenhouse gas emissions
- A report by the National Roundtable on the Environment and Economy (NRTEE) concludes that reduced emissions can be achieved using district energy and compact urban form

What should the Region do to move people around when gas is at its peak price?

- Look beyond energy and consider complete communities and compact form that supports transit more effectively
- David Hughes has produced a number of valuable reports on this topic
- Peel’s Energy Management Plan provides some valuable information

The Official Plan must look forward to 2031 and adhere to Places to Grow. What method should be used to address energy demands over that time period?

- Need to look 50 to 100 years ahead
- Get industry experts and trades people onside
- At present, all new retrofits and green construction would not be possible because there are not enough skilled people who know how to do this work
- Rather than identifying stakeholders, we should recognize that we all have a vested interest in the future and in planning
- Commercial development industry plays an important role
- Better utilize existing urban form by developing in already built areas and Brownfield’s

Which has more authority - Peel’s Energy Management Plan or the Official Plan?

- The Energy Management Plan needs to be finalized and endorsed before talking about how it relates to the ROP
- The ROP will take authority over the Energy Management Plan but would incorporate its ideas

Do we currently have the capacity for electric cars and light rail?

- It could be accommodated if it is spread out across Peel
- Time of use pricing could be used

Should the ROP discuss how to move bulk energy in urban areas?

- Bulk energy transmission is a transfer of a large quantity of primary energy resources or electric energy over a long distance

- There is a need to establish new corridors.
- Forecasts are very important in terms of settlement – i.e. where the population will settle, how will it be distributed and where the supply site is located
- Due to NIMBY issues, corridors need to be established well before people move into the communities
- The issue of bulk energy movement would not be relevant if communities adopted integrated energy systems

How can bulk energy transmission be done?

- Hydro One should work with municipal planning authorities and determine how to plan effectively
- Transportation and power corridors should be developed together
- Must build the corridors first and then develop housing areas
- Planning for bulk transmission has been criticized in several areas including Toronto
- Transmission lines are expensive
- Strong opposition to new transmission lines
- Energy supply companies just push the status quo
- The Region can grow and still reduce consumption by using energy conservation and local generation methods
- It is easier to use energy conservation tools in established communities
- Conservation tools do not work for development areas where farmers' fields are being converted into housing (requires transmission lines)

How can LEED standards move from being voluntary to mandatory?

- Use a point system
- Promote particular areas for wind farms using policies
- Areas located at the Escarpment would be ideal
- LEED is entry-level (a minimum standard) because it does not go far enough
 - LEED buildings must be connected to the distribution system and part of the overall transmission system
 - Must be accessible and not located on Greenfield's
- Windpower must be viewed as a supplement, not a main source of energy
- Wind power still requires the grid to back it up. It does not reduce the need for the grid
- LEED is not the only standard – NRCAN had a rating system for years
- Section 28 of the Planning Act could be expanded to allow a rating system
- Peel should consider the Newburg model
- Lower property taxes to encourage conservation
- Be aggressive and take risks
- Use a higher density standard of 100 residents and jobs combined per hectare instead of 50 residents and jobs per hectare required by the Growth Plan
- Consider harvesting animal waste
- Newmarket set targets (60% less energy and water with new developments)
- Municipalities want a LEED checklist

- Many municipalities are looking at how to get people/developers to consider LEED
 - Caledon is working on a green development incentives initiative
- Take advantage of existing built areas

What financial incentives exist for businesses?

- There are provincial incentives for retrofitting buildings to incorporate conservation measures in existing developments but financial incentives are limited for new developments

3.4 Take Home Messages

- The Region requires a good Energy Management Plan
- The ROP is a powerful tool that can be used to reduce energy consumption and explore energy options that will accommodate future growth
- Use as few documents as possible to integrate the concepts of energy conservation into the ROP
- Set goals that are feasible/achievable
- ROP needs to support/work with local municipal Official Plans
- Lobby provincial government for support in sustainability/energy alternatives
- Federal incentives are needed

4.0 Next Steps

As Peel Region moves forward with designing and planning of the Energy portion of the Official Plan Review (PROPR) it will be developing the following materials and working with stakeholders on the following:

- A discussion paper is being developed on alternative energy systems and sustainable land use development in Peel and GTA.
- An assessment of the current energy situation in Peel will be conducted;
- Research trends and future needs related to energy in Peel will be studied;
- Identification of existing energy related policy gaps in the Peel ROP; and,
- Proposed policy directions related to energy, which will add to, or strengthen the current ROP policies.

The Region of Peel will be in touch with updates and news throughout the process. Further public meetings for the Official Plan will also be held later in 2008.

5.0 Summary

Some of the major questions and themes that were continuously raised were the need for conservation and the need to work on building more sustainable and compact communities.

The concern over increasing energy demands with decreasing capacity and supply was a key message raised by all the panelists.

Planning for a future that is sustainable while still meeting the energy demands of citizens and residents of Peel Region will require strong support and action by the Region; local municipal tiers and higher levels of government. By working together to address local issues we can have a positive impact on climate change; respond to the implications of peak oil and non-renewable energy demand.

The Region of Peel requires a good energy management plan that sets achievable targets and plan for the future.

Appendices:

- Appendix 1: List of Participants Organizations
- Appendix 2: Welcome Presentation
- Appendix 3: Moderator’s Questions for Panelists
- Appendix 4: Keynote Presentation
- Appendix 5: Panelists Presentations
- Appendix 6: Panelists Bios and Workshop Agenda
- Appendix 7: Results of Evaluation Survey