AGENDA

GUELPH CITY COUNCIL

April 23, 2007 - 7:00 p.m.

Please turn off or place on non-audible all cell phones, PDAs, Blackberrys and pagers during the meeting.

- O Canada
- Silent Prayer
- Disclosure of Pecuniary Interest

SPECIAL MEETING

PRESENTATIONS

Community Energy Plan

- Dr. J. Laird, Director of Environmental Services; Mr. A. Stokman, Guelph Hydro; and Mr. Peter Garforth, Consultant of Garforth International

DELEGATIONS

Resolution (Councillor)

"THAT persons desiring to address Council be permitted to do so at this time."
Delegations are limited to a maximum of five (5) minutes.

- Mr. Stephen Rodd, on behalf of Guelph Environmental Leadership
- Mr. Albert Willis

COMMUNITY ENERGY PLAN

THAT Guelph City Council receives the Community Energy Plan from the CEP Consortium;

AND THAT Guelph City Council endorse the Vision, the Goals and the directions provided in the Community Energy Plan as the basis for community energy planning in Guelph;

AND THAT six (6) cross-departmental teams of staff be directed to work with our partners and other stakeholders to implement the directions provided in the Community Energy Plan, and

undertake feasibility studies leading to action plans relating to the scale projects, and to report back to Council and partner agencies during the third quarter of 2007;

AND THAT the Director of Environmental Services be directed to work with Guelph Hydro to develop a protocol for ensuring overall project coordination, reporting back to partners on progress, future partnership options, advocacy and engaging the community;

AND THAT Garforth International be thanked for their efforts in completing the Community Energy Plan;

AND THAT the Consortium partners be acknowledged and thanked for their leadership in developing Guelph's Community Energy Plan.

ADJOURNMENT

City of Guelph

ENVIRONMENTAL SERVICES

Report:

TO: Council

DATE: April 23, 2007 (Special Meeting)

SUBJECT: **COMMUNITY ENERGY PLAN**

RECOMMENDATIONS:

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AND THAT Guelph City Council endorse the Vision, the Goals and the directions provided in the Community Energy Plan as the basis for community energy planning in Guelph;

AND THAT six (6) cross-departmental teams of staff be directed to work with our partners and other stakeholders to implement the directions provided in the Community Energy Plan, and undertake feasibility studies leading to action plans relating to the scale projects, and to report back to Council and partner agencies during the third quarter of 2007;

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AND THAT Garforth International be thanked for their efforts in completing the Community Energy Plan;

AND THAT the Consortium partners be acknowledged and thanked for their leadership in developing Guelph's Community Energy Plan."

BACKGROUND:

At their meeting held May 16th, 2005, Guelph City Council approved the City's participation in a Community Consortium to create a Community Energy Plan (CEP). The Consortium of community partners has grown and includes representatives from several local organizations (Appendix "A").

The development of a Community Energy Plan (CEP) serves as an opportunity to identify sustainable alternatives to the energy needs of a growing municipality. The CEP comes at a time when the community's resources for future growth will be assessed through City's Local Growth Management (LGM) Strategy. The CEP forms one component of the strategy and identifies energy management strategies that minimize the need for additional energy resources to accommodate future growth. The benefits of the CEP include energy efficiency, cost savings, long-term competitiveness, environmental performance and a more sustainable energy future for Guelph.

City staff applied to the Federation of Canadian Municipalities (FCM) for funding through the Green Municipal Enabling Fund to develop a CEP. The City was advised on May 16th, 2006 that the application has been approved for $140,000 consisting of $70,000 grant money from FCM and $70,000 matching funds from project partners. Based on FCM and partner funding, Garforth International, an energy consulting firm, was engaged to work with the Consortium partners to develop the CEP. The CEP process was officially launched on June 6th, 2006.

The CEP final report was delivered by Garforth International to the Consortium of partners on April 3, 2007.

REPORT:

To develop the CEP, the Consortium considered best global practice and the level of success achieved by other communities in Europe, Canada and the USA. It became clear that success was based on broad community support and multi-stakeholder leadership. Through the process, the business community, developers, home builders, school boards, the university, neighbourhood groups, city administration, elected officials, and others were engaged in a series of public workshops and stakeholder focus groups (see Appendix B for summary of the consultation process).

The Executive Summary of the CEP (refer to Appendix "C" attached), outlines the Vision of the CEP, which is:

"Guelph will create a healthy, reliable and sustainable energy future by continually increasing the effectiveness of how we use and manage our energy and water resources."

The Vision will be achieved through five goals that "focus on the CEP's role in attracting quality investment, in ensuring reliable and affordable energy, in reducing environmental impacts, in enhancing Guelph's competitiveness, and in aligning public investment with the CEP".

The five goals are:

1. *Guelph will be the place to invest, supported by its commitment to a sustainable energy future;*
2. *Guelph will have a variety of reliable, competitive energy, water, and transport services available to all;*
3. *Guelph energy use per capita and resulting greenhouse gas emissions will be less than the current global average;*
4. *Guelph will use less energy and water per capita than comparable Canadian cities;*
5. *All publicly funded investments will visibly contribute to meeting the other four CEP goals.*

To ensure success, the plan identifies a number of potential projects of significant size (scale projects). To achieve early and meaningful success, six (6) projects are recommended for implementation in the short-term, including:

- Development of an integrated energy and water master plan for the south end of Guelph, including the industrial parks and the south end community, to be implemented in a time frame consistent with the phased development of the industrial parks;
- Development of an integrated energy and water master plan for St. Patrick's Ward and/or the Downtown Community Improvement Plan, to be implemented in a time frame consistent with the planned infrastructure renewals (e.g. sewer upgrades);
- Development of an integrated energy master plan for the University, based on the commitment provided by the President of the University;
- Work with Natural Resources Canada to undertake a pilot in Guelph for their new Energy Performance labeling program;
- Development of a multi-utility energy services concept, including demonstrations such as the "Thousand Solar Roofs" project.
- Review of development approval process to consider tools/incentives to encourage/promote energy efficient growth.

These projects will each require a project team to develop an action plan for implementation, considering issues such as: feasibility study, if required; cost of each phase\step; funding sources\ budget requirements; timelines; measurements of success; etc.

Depending on the project, team members may include: City Departments /Divisions (e.g. Community Design & Development Services - Economic Development, Engineering Services, and Policy Planning; Environmental Services – Conservation and Efficiency, Waterworks; Community Services – Community Development; Finance; Corporate Services – Legal Services, Corporate Property Services), private developers/GDA, Guelph Hydro, Union Gas, the Guelph Home Builders Association, the University of Guelph, co-generation expertise, multi-utility implementation expertise and extensive district heating technical and management expertise.

An initial meeting has been held with some of the key stakeholders to recommend the team leadership and membership for each project. The next step will be to form each of the multi-stakeholder teams and to have each team develop their action plans for moving forward. In addition, the Consortium Co-chairs will develop a protocol to ensure the advancement and reporting of the overall CEP.

In addition to the six project-specific teams, it is recommended that the two lead agencies (the City and Guelph Hydro) continue to provide overall project coordination and leadership.

Also appended is a summary of one project which has been successfully piloted, the Project Porchlight in Guelph program (Appendix "D"), and a list of many programs undertaken previously in the City (Appendix "E"), and copies of letters of support received from various agencies.

CORPORATE STRATEGIC PLAN:

5.3 Engage the residential, industrial, commercial and institutional communities in best practices for resource management and environmental protection.

FINANCIAL IMPLICATIONS:

Through the development of action plans, funding requirements for the first steps, including feasibility studies and available funding options will be considered and brought to Council and partner agencies for consideration during the third quarter of 2007. Federal and Provincial funding programs are available and will be pursued whenever possible.

DEPARTMENTAL CONSULTATION:

Three City Departments, Environmental Services, Community Design and Development Services, and Community Services were represented on the CEP Consortium.

COMMUNICATIONS:

None required. However, a CEP Communications Subcommittee is engaged in promoting and advocating the CEP throughout the community through a 3-stage process: communication through the Plan development phase; launching the Plan once adopted by stakeholders; and communication during implementation. Guelph Hydro, City staff and Council, and all Consortium members will continue to promote the CEP to all sectors of the community.

ATTACHMENTS:

Appendix "A" - List of Consortium Member Agencies

Appendix "B" - List of Community Engagement Workshops

Appendix "C" - CEP Executive Summary

Appendix "D" - Project Porchlight in Guelph – Overview

Appendix "E" - City Initiatives - City of Guelph Commitment to Efficiency

Appendix "F" - Copy of April 3, 2007 correspondence from Charles Simon Architect & Planner

Appendix "G" - Copy of April 5, 2007 correspondence from Grand River Conservation Authority

Appendix "H" - Copy of April 11, 2007 correspondence from Guelph Hydro Inc.

Appendix "I" - Copy of correspondence received April 16, 2007 from the Wellington Catholic District School Board

Recommended By:
Janet L. Laird, Ph.D.
Director, Environmental Services

Approved for Presentation:
Larry Kotseff
Chief Administrative Officer

Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "A"

LIST OF COMMUNITY CONSORTIUM AGENCIES

City of Guelph

Guelph Hydro

University of Guelph

Upper Grand District School Board

Wellington Catholic School Board

Guelph Chamber of Commerce

Union Gas

Friends of Guelph

Guelph Development Association

Charles Simon, Architect and Planner

* * * * *

Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "B"

LIST OF COMMUNITY ENGAGEMENT WORKSHOPS

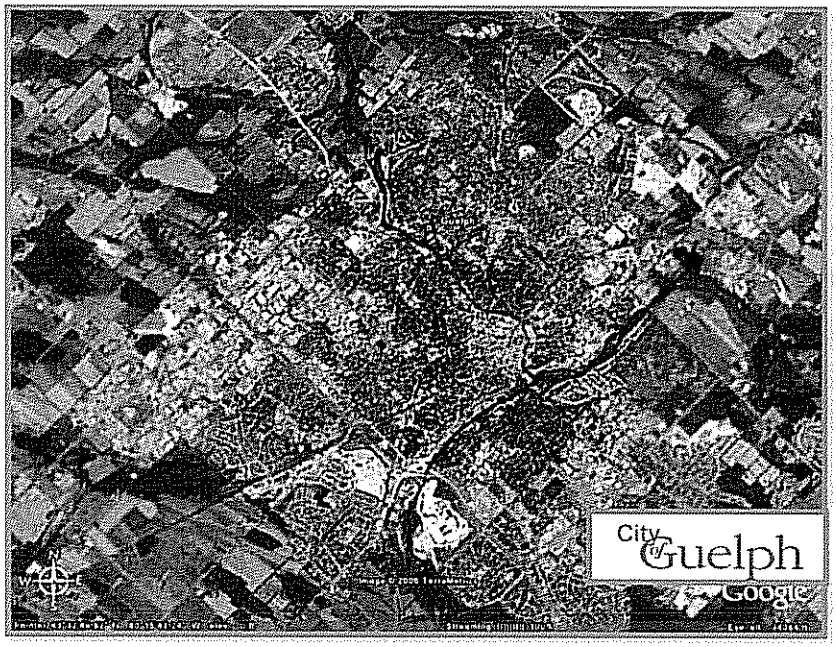
The following list of meetings and workshops were facilitated by members of the Community Consortium and Garforth International.

Community Sector or Group:	**Date:**
Initial Community Workshops	December 2005
• University Workshop	December 5th, 2005
• Public Workshop	December 5th, 2005
• Business Breakfast	December 6th, 2005
• Students (UGDSB, WDSSB)	December 6th, 2005
CEP presented to Growth Management Workshop	May 24th, 2006
Meeting with University staff	June 7th, 2006
Meeting with Upper Grand District School Board staff	June 7th, 2006
Meeting with Guelph Hydro staff	June 7th, 2006
Community Presentation #1 with Guelph Development Association	June 22nd, 2006
Community Presentation # 2 with large Energy Users and other IC&I groups	July 6th, 2006
Community Presentation # 3 with City Council and Guelph Hydro Board	September 6th, 2006
Community Presentation # 4 with Secondary School students	October 10th, 2006
Community Presentation # 5 with Energy and Environmental Groups	October 10th, 2006
Community Presentation # 6 Small and Medium Sized Enterprises	November 15th, 2006
Community Presentation # 7 General Public Workshop	November 16th, 2006
Meeting with Guelph Development Association	February 21st, 2007

CITY OF GUELPH
COMMUNITY ENERGY PLAN

Final Report dated 3rd April 2007

Prepared For
Guelph Community Energy Plan Consortium



Garforth International llc
Energy Productivity Solutions

OWENS CORNING

MVV Energie

Remmer Consulting

2121 Boshart Way, Toledo, Ohio 43606, USA

2. EXECUTIVE SUMMARY

For over two centuries, the ready availability of low cost energy has allowed the world's industrialized countries to achieve unprecedented levels of well being and prosperity. Recent dramatic increases in costs and price volatility are putting the spotlight globally on how effectively we use energy. The rapid growth of China and India is putting further pressure on the world's energy supplies and climate. Despite its plentiful energy resources, Canada is increasingly exposed to the full force of the global energy market pressures and can look forward to energy costs trading upwards combined with pricing uncertainty.

The evidence is growing that the human use of energy is causing greenhouse gas emissions that are beginning to have significant effects on the climate. Recent opinion polls indicate that this is now viewed as the most critical issue for most Canadians, underlined by the renewed political commitment to meet international greenhouse gas emissions targets.

Over half of the world's population lives in cities, and in Canada that proportion is closer to 80%. Of all the energy used in Canada, over half is for buildings, homes, and transportation within cities. Homes and buildings use over 30% of all energy in the country and consume more than half of all the electricity. Cities are increasingly recognizing that the quality of life and competitiveness will in part be driven by how effectively they manage the use of their energy and water resources.

Guelph's leaders recognized the growing importance of effective management of energy and water to the economy and environment, and in 2004 formed a Consortium to proactively develop a community energy plan. The Consortium represents all facets of the community including the administration, academia, business, the gas and electric utilities, and other community groups. In 2006, the Consortium decided to formalize a long-term Community Energy Plan (CEP) which would guide the city's energy future for years to come. The CEP team had a balanced mix of local and global expertise ensuring the plan incorporated the best elements of urban energy management from around the world.

Guelph, with its current population of 115,000, plus an additional 18,000 students during the academic year, is a thriving town well situated in the "Golden Triangle", an area to the west of Toronto that is attracting significant growth. Guelph's population is expected to grow to 180,000, probably within its current boundaries, supported by significant commercial and industrial development.

In rough numbers, the growth will add about 20,000 homes and somewhere between 400,000 and 500,000 square meters of non-residential construction, along with significant industrial growth.

To support this growth, the city has made a commitment to implement an energy plan that will ensure the long-term competitiveness and environmental performance of the city. The Guelph CEP was developed to be much more than an inspirational statement. It was created very much with implementation in mind. For this reason the team looked at success stories from the USA, Canada and Europe to adopt the best ideas that had clearly worked elsewhere. All of these success stories underlined the need to take a long-term, multi-decade view and to have community leadership that ensured long-term, consistent implementation of the basic strategies year after year. Another key element was to see the energy supply of the city as an integrated whole.

City of Guelph Community Energy Plan

The overall vision of the CEP is simple:

Guelph will create a healthy, reliable and sustainable energy future by continually increasing the effectiveness of how we use and manage our energy and water resources

This vision is supported by five goals that focus on the CEP's role in attracting quality investment, in ensuring reliable and affordable energy, in reducing environmental impacts, in enhancing Guelph's competitiveness, and in aligning public investment with the CEP. Each has recommended long-term measurements detailed in the plan.

- ***Guelph will be the place to invest, supported by its commitment to a sustainable energy future***
- ***Guelph will have a variety of reliable, competitive energy, water, and transport services available to all***
- ***Guelph energy use per capita and resulting greenhouse gas emissions will be less than the current global average***
- ***Guelph will use less energy and water per capita than comparable Canadian cities***
- ***All publicly funded investments will visibly contribute to meeting the other four CEP goals***

Successful delivery of these goals brings tangible financial and other benefits to residents, local business, the city administration, developers and builders, banks and investors, and the energy suppliers.

Guelph was an early pioneer in the development of community energy solutions by being a key player in developing municipal energy distribution in Ontario 100 years ago. Taking the lead for the next 100 years is entirely consistent with this tradition. Today the city covers about 86,000 km2. The population of 115,000 is estimated to grow by at least 2% per year to approximately 180,000 by 2031. Residential growth will be from a mixture of redevelopment in some older areas, and new development on greenfield sites. Industrial and commercial developments are planned in six areas around the city.

Today, Guelph uses a total of 6,030 gigawatt hours of equivalent energy (GWh_e) from fuels of all types, or 52.45 megawatt hours of equivalent energy (MWh_e) for every inhabitant of the city. If the heat wasted in the production of electricity for the city is included, the total rises to 8,475 GWh_e or 73.71 MWh_e/capita. This is the energy directly consumed in the cities buildings, vehicles, and industries, and does not include energy used in ships, airplanes, long-haul freight or other transportation. In general, the Guelph CEP focuses on the energy directly used in the city as this can be more easily influenced by community action. In 2005 a total of 19.2 million cubic meters of water was pumped and treated. Lost water totaled approximately 14 percent of all water pumped. The average daily water demand was 52,579 cubic meters.[2]

[2] http://guelph.ca/uploads/ET_Group/waterworks/Waterworks_Summary_Report_2005.pdf

This use equates to 230 to 250 litres per equivalent population per day for household uses.

Guelph's climate, with over 4,352 heating degree days compared to only 180 cooling degree days, puts a high demand on space heating, and the plan addresses the heating alternatives in some detail.

The CEP was developed using the following priorities:

- Maximize the energy and water efficiency for buildings, vehicles and industry
- Maximize use of heat generated in electricity generation and existing industrial processes
- Incorporate as many renewable energy sources as feasible
- Team with the existing electricity and gas networks to avoided wasteful duplication of assets

Cities that systematically implement these principles year after year typically have energy levels at least half of the current levels of Guelph, with all the associated economic and environmental benefits that this brings.

On the first priority, efficiency, detailed assessments were made of the present 33,000 homes and 1.7 million m^2 non-residential buildings by age and energy use. The needs for the future industrial energy use and transport fuels use were similarly assessed.

Following these priorities, the CEP recommendations are:

Use efficiency to create at minimum all the energy needed to support the growth of the residential sector

It is feasible to add about 20,000 homes with no net increase in energy needs and this is the recommended target. Ontario recently passed stringent new energy efficiency building codes that will be fully in force by 2012. The CEP is recommending that the city explore incentives and other approaches to immediately implement the full code. This alone, combined with energy efficiency requirements on major residential renovations creates all the energy needed for growth.

From 2012 onwards, the CEP is recommending a steady annual improvement in energy efficiency of about 1% per year, which by 2031, would be a level that aligns with global best practice from Scandinavia and Germany.

Use efficiency to create all the energy needed to support the growth of the commercial and institutional sectors

Similarly, all the energy needed to support the entirety of the growth of commercial and institutional buildings energy needs can be met by the same combination of immediate implementation of the new codes and efficient renovation.

Adopt an energy performance labeling scheme for buildings as a voluntary initiative for the city, teamed with Natural Resources Canada and a local mortgage bank, to act as a pilot for the whole of Canada to gain about 5% incremental delivered efficiency

The CEP is recommending that all new and existing buildings have an Energy Performance (EP) Certificate that guarantees the building's energy consumption in normal operation at the time the building is sold or even rented. There is no Canadian EP Certification at present. It is

the subject of much discussion at a Federal level in Canada, and the recommendation is to offer Guelph as a national pilot.

The recommendation is to model around an emerging approach being discussed in Canada that is an amalgam of the Canadian Energy Guide and the European Union approach.

The experience in other jurisdictions is that this stimulates somewhat higher quality buildings and a certain amount of "efficiency competition" between developers.

Add to Guelph's attractiveness for quality industrial investment by offering world class tailored energy services and achieve annual investment growth rates higher than the underlying population growth, with no overall increase of the primary energy needed to serve the first fifteen years of growth.

Increasingly, industrial investors are looking at energy services as a key part of their decision on where to invest. The CEP is recommending developing tailored energy services for selected industrial development areas that not only deliver gas and electricity, but also selectively deliver other energy forms such as compressed air, process steam heating and cooling, etc.

Meet Guelph's growing transport requirements while reducing the transportation energy use by 25%, using sensitive urban design, effective alternative transport options, and encouraging vehicle efficiencies.

Transport fuels collectively represent 30% of all the energy used in Guelph, and account for a huge 45% of all the greenhouse gas emissions caused by the city. The CEP recommends a multi-pronged approach that includes various measures to encourage more efficient vehicles, urban design that reduces vehicle journeys, and focused attention on appropriate competitive mass transit.

Many of these measures were already being developed in detail in Guelph's wider transport and urban planning. The CEP is underlining the importance of their success to meeting the overall energy and climate change goals.

Incrementally create energy distribution architecture in Guelph that will allow the majority of the city to be served with fuel choices that optimize cost, availability, and environmental impact long into the future.

Over the coming years major changes will happen in energy and environmental legislation, fuel availability, the viability of emerging alternative energy technologies and their relative costs. To be able to achieve maximum benefit from these changes, the CEP is recommending a stepwise development of district heating networks covering the higher density areas of the city to supply space heating and domestic hot water. These networks also provide an efficient and economic way to distribute heat from a variety of existing and new energy sources.

In evaluating benchmark cities such as Mannheim or Copenhagen, we find that a common feature of these very efficient and reliable energy and water systems was the existence of all energy services being supplied by a single company. This avoids the inefficient use of primary fuel, and allows a rational integration of alternative energy sources. The CEP is recommending this approach.

City of Guelph Community Energy Plan

Within fifteen years, at least a quarter of Guelph's total energy requirement will be competitively sourced from locally created renewable resources

The challenge around climate change will increasingly turn the focus on renewable fuels as a viable and essential way to reduce greenhouse gas emissions. Currently the economic value of greenhouse gas reductions is zero, but this is likely to change as various market mechanisms come into force.

The CEP is strongly recommending a target to install the equivalent of a "Thousand Roofs" of solar photovoltaic electricity.

The heat demand of the area makes it a natural fit for integrating bio-mass heat sources combined with district heating to provide about 10% of the base load heat needs through the winter. The local wind quality makes energy from turbines marginal under the current technology. Last but not least, the growing need to find environmentally acceptable ways to manage municipal waste merits a rigorous assessment of the waste-to-energy potential.

Target – At least 30% of Guelph's anticipated electricity requirements will be associated with Combined Heat and Power (cogeneration) by 2031.

As the city's energy evolves to include more district energy, it begins to include small and medium scale combined heat and power installations. Today Guelph's 1,627 GWh annual electricity use in reality uses 4,074 GWh_e of fuel, the difference being lost as heat, creating non-productive costs and significant greenhouse gas emissions. By implementing CHP within larger developments, much of this heat can be effectively captured and used, creating major cost and environmental benefits. The CEP recommendation is to proactively seek CHP projects with a total electric capacity in the 75 to 100 MW range with a comparable level of heat recovery.

Guelph will reduce the magnitude of the summer grid electrical peak by at least 40% by 2031 to avoid the need for investment in new electrical infrastructure to serve the growth of the city

One of the consequences of growing prosperity and the norms of new construction is the increasing use of air-conditioning, even though climatically there is relatively little need. The result is very high electrical demands for a few hours a day during the summer months. This peak drives substantial investments in underutilized generation, transmission and distribution assets by the electric utility.

The cumulative effect of many of the preceding measures including efficiency, cogeneration, heat recovery and solar PV will moderate and reduce the peak.

Guelph will systematically create an integrated energy metering, billing and management network across the entire city to allow cost-effective management of all energy forms

The energy breakthroughs foreseen by the CEP arise as a result of seamless integration of energy efficiency along electrical, gas and district heating networks, with a flexible and, over time, changing mix of renewable and non-renewable energy sources. Such an approach requires a high degree of management and data sharing across the different parts of the system to deliver maximum benefit. The recommendation is to establish a common data management and metering architecture within the city.

City of Guelph Community Energy Plan

Guelph will implement large area high-efficiency Scale Projects that accelerate progress towards a successful implementation of the CEP by creating early success and developing a deep pool of community expertise

All too often, CEPs fail to deliver due to a lack of sufficient scale and early success. The Consortium was committed to make sure that did not happen in Guelph. As a result, the CEP is recommending implementing neighborhood energy plans in relatively large, but bounded areas of the city.

The plan is calling for the early identification and implementation of Scale Projects. Some specific ideas are included as part of the CEP, and include various business and industrial areas, the greenfield mixed use developments targeted for the south of the city, the University of Guelph Campus as a whole, and the revitalization of the St. Patrick's Ward. These are offered as viable examples of potential Scale Projects.

The CEP also recommends elements that will ensure long-term successful implementation. Many Federal, Provincial and local programs exist and the CEP is recommending the city maintain information and offer assistance to capture as many of these resources as possible. The Consortium clearly recognizes that some of the measures proposed will require adjustment or interpretation of regulatory or other legal constraints, and is committed to clear these kinds of market barriers wherever possible. Since many of these challenges will be of interest beyond Guelph, the CEP is suggesting that Guelph can be a national prototype as these market and regulatory structures emerge. A high priority in this area will be to establish the market framework of a municipal energy service organization that is structured to ensure the highest reliability, least cost and least environmental impact energy services of all types.

Guelph's elected officials, business community, financial institutions, neighborhood groups, utilities, architects, developers, construction industry, academia and the city administration are clearly committed to the vision, goals, recommended actions and progress of the CEP as a key measure of Guelph's overall success in becoming a world class city in which to live, work and play.

In support of this, the CEP is recommending community and neighborhood groups be instrumental in ensuring Scale Projects are sensitively implemented and the energy and environmental goals are fully achieved. The CEP also presents an amazing opportunity for the University of Guelph and other colleges to build on the city's commitment to the CEP by developing specialist areas of study, training and research such that Guelph will become a center of excellence on the theory and practice of sustainable urban development.

The goals that the CEP has established are intentionally very aggressive and are generational in nature. The CEP is strongly recommending the city put in place a regular reporting system to track the progress towards the goals and to share best practices with the community, both through conventional and electronic media, and as a regular topic at City Council Meetings.

Guelph is already blessed with a number of commercial, non-profit and general interest groups as well as individuals working towards sustainability, energy efficiency and alternative energy in some way. The CEP made a first step to create an inventory of some of these resources, and this should be the basis of a developing resource database.

Despite the anticipated growth of the population and increase in economic activity, the overall fuel use required by the city to deliver all its energy service will actually decrease from today's total of 8,475 GWh_e to 6,135 GWh_e in 2031. This represents a decrease of greenhouse gas

emissions, currently at an estimated 16 tonnes per inhabitant, to about 7 tonnes. This is still some distance from the ambitious goal, but at a level that is clearly putting Guelph among the top energy performers in the world.

At the same time, Guelph will take its place as one of the most competitive and attractive cities in Ontario and Canada, with a core energy productivity expertise that will be sought out around the world.

Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "D"

PROJECT PORCHLIGHT IN GUELPH – OVERVIEW

The goal of Project Porchlight is to have every household in Canada change one old-fashioned, inefficient incandescent to an energy-efficient CFL bulb.

In October 2006, staff from the Community Development Division (Community Services) submitted two grant proposals to One Change in Ottawa and the Ministry of Energy, to bring a pilot Project Porchlight to Guelph neighbourhoods.

The connection to the larger work of the Community Energy Consortium was apparent and, complimented the objectives of the CEP with growing public awareness and community spirit for conservation. Project Porchlight was identified as a desired program by residents at the November 16, 2006 public workshop.

The grassroots program encouraged community participation by making it possible for anyone to volunteer to deliver bulbs in their neighbourhood. Guelph residents were empowered to make a change that will lower energy consumption, and thereby lower greenhouse gas emissions from power plants.

This pilot of 10,000 CFL bulbs was developed in partnership with One Change in Ottawa and over 150 Guelph residents' volunteer time and commitment.

In a recent announcement by the Provincial Government, the provincial budget has identified funds for Project Porchlight, and will result in the full implementation of the program here in Guelph in 2007.

A Guelph Toolkit has been developed and is ready for implementation in the next phase.

Interest from bordering municipalities is quickly growing. Staff is currently exploring creative ways to be supportive of those municipalities and provide leadership with this program and energy conservation as a whole.

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Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "E"

CITY INITIATIVES
CITY OF GUELPH COMMITMENT TO EFFICIENCY

- New south end public library - use of natural lighting;
- New Civic Administration Centre - designed to meet Leed Silver rating for energy and water efficiency;
- Adding energy efficient systems to the City-owned Senior Centre;
- The cogeneration facility at the City's landfill site, in partnership with Guelph Hydro (i.e. Ecotricity);
- The cogeneration facility at the Wastewater Treatment Plant, in partnership with Guelph Hydro;
- Currently working with Guelph Hydro to improve operating efficiencies at the Wastewater Treatment Plant through replacement of existing equipment with high efficiency options;
- Currently working with Guelph Hydro to explore energy efficiencies at the Material Recovery Facility at the City's Waste Resource Innovation Centre;
- Use of Biodiesel in City buses;
- Free transit to entire community on national Clean Air Day;
- Subsidization of rain barrels, toilet replacement, washing machine replacement;
- Outside Water Use Program;
- Other water conservation programs (see elsewhere);
- Annual Children's Ground Water festival;
- Investigation of adjusting water billing rates to promote conservation;
- Water/Wastewater IC&I capacity buy-back program;
- Introduction of fuel efficient vehicle to City fleet to assess;
- Replacement of incandescent bulbs to LED in all traffic signals;
- Programs to encourage use of transit to seniors, high school students and University students and large industrial areas or individual facilities;
- In 1998, City Council committed to meeting the Kyoto targets by 2010.

* * * * *

FILE COPY

Charles Simon Architect + Planner 11.431.020C

Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "F"

221 Barden Street
Eden Mills, Ontario
N0B 1P0
Tel: 519-856 9921
Fax: 519-856 9921
simon.edenmills@sympatico.ca

Mayor Farbridge and Members of Council
City Hall
59 Carden Street
Guelph, ON
N1H 3A1

3rd. April 2007

Dear Mayor Farbridge and Members of Council

RE: City of Guelph Community Energy Plan

I am very privileged to have been a representative on the Consortium guiding and reviewing the preparation of this Plan.

My planning and architectural design involvement in low/alternative energy initiatives reaches back over almost forty years (even before the AOPEC crisis). From this considerable perspective, I am happy to say that the recommendations contained in the Report prepared by Peter Garforth and his colleagues embody a truly encouraging promise of realistic action on a significant scale. They could make Guelph a leader within the country and could increase its business and fiscal competitiveness immeasurably.

I strongly commend the Report to you and look forward to the implementation of measures which will contribute to our future heritage.

Yours truly,

Charles Simon.

Charles Simon, OAA, MTPIC, Hon. OALA

Grand River Conservation Authority

400 Clyde Road, P.O. Box 729
Cambridge, Ontario N1R 5W6

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Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "G"

April 5, 2007.

Mayor Karen Farbridge,
City of Guelph,
59 Carden Street,
Guelph, Ontario.
N1H 3A1

Dear Mayor Farbridge:

The members and staff of the Grand River Conservation Authority are very impressed with the City of Guelph's interest and progress in community energy planning.

We understand that the City of Guelph council will be considering the Community Energy Plan at an upcoming meeting. We wish to congratulate the City for being forward thinking and ask that you keep us informed of the progress of this important initiative.

Yours truly,

Alan Dale,
Chair,
Grand River Conservation Authority

Paul Emerson,
Chief Administrative Officer,
Grand River Conservation Authority

Guelph Hydro Inc.

Report to Council (Special Meeting)
April 23, 2007

Re: Community Energy Plan

APPENDIX "H"

395 Southgate Drive
Guelph, Ontario, N1G 4Y1
Telephone 519-837-4718
Fax 519-836-1055
www.guelphhydro.com

April 11, 2007

Mayor Karen Farbridge
City of Guelph
59 Carden Street
Guelph, ON N1H 3A1

Dear Karen:

Re: Community Energy Plan

It has been a privilege for Guelph Hydro to have contributed to the development of the Community Energy Plan from its earliest days; and it is our privilege now to endorse its recommendations and recommend its implementation.

The consortium formed in 2004 to study Guelph's energy needs has had far reaching consequences. The resulting development of a Community Energy Plan in just two years reflects an extraordinarily proactive approach to energy and environmental management at many levels. It also creates a viable framework for Guelph's future competitiveness, relying as this plan does on the responsible acquisition and sustainability of all resources required for growth.

Creating a healthy, reliable and sustainable energy future through the effective use and management of energy and water resources is a wonderful vision for our community.

We recognize, with thanks, the significant leadership shown by the City while the plan was in development. We encourage all members of the community to read the plan, to know what must be done to make it happen, and to put that knowledge into action, every day.

Sincerely,

GUELPH HYDRO INC.

Paul Truex
Chair, Board of Directors

Thx for "driving" this process, Karen! We look forward to being a part of the team that moves the CEP from paper to results! Well Done! Paul

Wellington Catholic
District School Board
We Have Faith in Education

Office of the Director

75 Woolwich Street
P.O. Box 1298
Guelph ON N1H 6N6

Tel. 519/821-4600
Fax 519/824-3088

Mayor Karen Farbridge
City Hall
59 Carden Street
Guelph, ON N1H 3A1

Dear Mayor Farbridge:

As you may know the Wellington Catholic District School Board has always taken the initiative in energy conservation. Over the past few years we have expended considerable resources to upgrade all of our sites in the City of Guelph. We have also engaged in a significant energy reduction program with the private sector in a concerted effort to reduce our costs and to enhance efficient use of energy at all of our sites.

During the past few months, we have been represented by Mr. Peter Rodway, from our Plant and Operations Department, in the creation of the Community Energy Plan. We fully endorse this important initiative as it is critical to participate with our community partners in this regard and to educate those in our schools as to its importance.

Our very recent work with Guelph Hydro in the introduction of energy efficient light bulbs and in our concurrent work in the separation of useable waste in all city schools are but two recent examples of our financial and moral commitment to the imperative of the environment.

We are hopeful that all other relevant partners will choose to participate in this exciting and important work.

Sincerely,

Don Drone
Director of Education
dk

April 16, 2007