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<b>TO:</b>	<b>CHAIR AND MEMBERS - PLANNING COMMITTEE</b>
<b>FROM:</b>	<b>R.W. PANZER GENERAL MANAGER OF PLANNING &amp; DEVELOPMENT</b>
<b>SUBJECT:</b>	<b>PLACEMAKING AND RENEWABLE ENERGY SOLUTIONS LEVERAGING COUNCIL'S PLACEMAKING DEMONSTRATION PROJECT TO OBTAIN FEASIBILITY STUDY FUNDING FOR A PARALLEL COMMUNITY RENEWABLE ENERGY PROJECT MEETING ON FEBRUARY 27, 2006</b>

<b>RECOMMENDATION</b>
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That, on the recommendation of the General Manager of Planning and Development, the following actions be taken:

- a) Civic Administration **BE DIRECTED** to submit an application to the Federation of Canadian Municipalities (FCM) - Green Municipal Fund (GMF) to secure a grant for the following Feasibility Study: "Placemaking in the City of London through Smart Growth and Renewable Energy Solutions: A Market-driven Feasibility Study to Define Sustainable Energy Management Options and Plans for a New "Sense of Place" Residential Community," noting that there are no additional funds required from City sources for this project;
- b) Civic Administration **BE DIRECTED** to enter into an agreement with Natural Resources Canada to manage Part 1 of the Feasibility Study including funds obtained from the Technology & Innovation (TI) Buildings Program at Natural Resources Canada, and;
- c) Based on a positive funding response from FCM-GMF, Civic Administration **BE DIRECTED** to enter into an agreement to manage the remaining components of the Feasibility Study including funds obtained from third party sources.

<b>PREVIOUS REPORTS PERTINENT TO THIS MATTER</b>
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**May 10, 2004 Report to Planning Committee** – This report provided an overview of Smart Growth and Placemaking, and indicated that the feasibility of these concepts could be best determined by initiating a local demonstration project with participation by local developers, municipal officials, design consultants and review agencies. The recommendation clause was referred back to Planning Committee for further detail prior to initiating the demonstration project (a copy of this report is attached, for reference).

**March 21, 2005 Report to Planning Committee** – This report recommended adoption of the Sunningdale North Area Plan and Official Plan Amendment with provision for a mixed land use district, a pedestrian-oriented commercial streetscape, minimum densities and a community focal point. The concept, which was approved by Council, included several smart growth and placemaking design elements which are not standard in suburban locations. It is anticipated that some similar features will be considered as part of the initiatives being recommended in this report.

**July 18, 2005 Report to Planning Committee** – This report provided a terms of reference for a Placemaking Demonstration Project in London and established the basis for an agreement between the City of London and Z Group to conduct a demonstration project that will support the principles of Smart Growth and Placemaking for the lands bounded by Commissioners Road on the north, Jackson Road on the west, and the Hydro One Networks corridor on the south and east.

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**BACKGROUND**

**PURPOSE:**

The purpose of this report is to provide background information and recommendations for pursuing funding from the Government of Canada and the Federation of Canadian Municipalities' (FCM) Green Municipal Funds for feasibility study funding for a community renewable energy project integrated with the Council-approved *Placemaking* project. This Feasibility Study would involve no net additional funding from the City of London.

**CONTEXT:**

***Placemaking Project***

On July 18<sup>th</sup>, 2005, Municipal Council approved the terms of reference for a Placemaking Demonstration Project. The intent of the project is to bring many stakeholders in the subdivision development process together in order to consider alternative forms of suburban development that result in communities that have a high quality of urban design and a sense of place. This design-oriented project is now well underway. Michael Hannay, of Zelinka Priamo, has provided the lead consulting services of this project and Planning Staff have played a major role in moving the project forward. Several meetings have taken place, bringing together planners and engineers from the municipality, to consider alternatives to current standards which may be stunting creativity and opportunities for better suburban communities. Others engaged in these meetings include representatives from various utility providers, members of the development community and representation from the Urban League of London.

Through this project, the City's endorsed Smart Growth and Placemaking partner from the development community is Z Group. They have been engaged in the process to date and have agreed to help develop and consider alternative designs for their property east of Summerside (southeast of Jackson Road and Commissioners Road East). City Staff are working with a Steering Committee to develop a "palette" of placemaking tools that can be used to design high quality communities with a heightened sense of place – "new communities with a soul".

***Designing and Developing for Energy Conservation and Renewable Energy Solutions***

As outlined in the February 2003 Council statement of direction on Air Quality in London: *Moving Forward Locally*, the Federal Government will "be relied upon and encouraged to deliver specialist scientific expertise, knowledge, funding programs, innovative technologies and related initiatives for air quality research projects and for overall monitoring of southwestern Ontario's air shed." The statement of direction also states that "projects and solutions be integrated wherever possible with local community initiatives".

Through London's EnerGuide Partnership, the City of London has been working in partnership with the London Home Builder's Association (LHBA) to promote increased energy-efficiency in new home construction as well as home retrofits. As of February 2006, there are five LHBA builder members who are using the federal *EnerGuide for New Houses* program to offer energy-efficient homes for their customers. These builders represent one-in-four new homes built in London.

At the recommendation of FCM, Natural Resources Canada (NRCan) approached the City of London in August 2005 to determine the City's interest in examining community renewable energy systems. The City of London has become recognized as one of Canada's leaders in establishing partnership programs with businesses and senior levels of government on a variety of environmental initiatives.

This initiative would be similar to the feasibility work used to establish the solar energy demonstration project in Okotoks, Alberta. However, it would look at a wider range of technology including improved heating and cooling system design, solar heating and solar electricity generation, and using underground aquifers for cooling homes. Although the Okotoks project addressed renewable energy, the actual housing stock and community design built in Okotoks did not address the streetscape or any other factors of urban design. As a result, the proposed building form that the project yielded was less than desirable.

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***Exploring the Opportunity - Integrating Design for Placemaking and Energy Conservation***

At a subsequent between NRCan’s project team and City staff from the Planning & Development and Environment and Engineering Services Departments, it became apparent that there was the potential to integrate this project with the City’s *Placemaking* project. The *Intent to Apply* was prepared by NRCan’s project team, reviewed by City staff, and submitted to the FCM on January 25, 2006. The *Intent to Apply* was accepted by the FCM on February 10, 2006.

In order for the proposal to be eligible to receive a grant from the Green Municipal Fund in a timely fashion, a more-detailed *Application to the Green Municipal Fund* needs to be submitted to the FCM by March 7, 2006. A formal *Letter of Commitment* is required from the City of London to support the application.

**DISCUSSION:**

**Stage 1: Feasibility Study**

**Project Overview**

The proposed community renewable energy project is exemplary of the type of project the City of London wants to pursue under our strategy, *Air Quality in London: Moving Forward Locally*. The Project would bring expertise, knowledge, and innovative technology to London’s home building sector. The City’s existing financial commitment in the *Placemaking* project and air quality/climate change awareness initiatives will be used to leverage funding from NRCan and the FCM’s Green Municipal Fund.

The objective of “placemaking” is to create high quality, livable neighbourhoods that offer a strong sense of community. This can be achieved through environmentally friendly homes, good architectural design, pedestrian-oriented streets, accessible recreational amenities and community focal points. These elements will help to provide a safe, healthy environment, and create sense of place that residents can identify with and become connected to. This Project, which will study energy solutions, will concurrently feed into the overall *Placemaking* project at the City of London. It is useful to think of the *Placemaking* design component of this project operating on a parallel track to the Community Renewal Energy component of this project, with many cross-overs throughout the process.

**Project Philosophy**

In the past, new energy technologies have been introduced to builders based on short term incentives without established market structural support or sustainable economic conditions. This has not resulted in significant market penetration of these new technologies.

The approach in the proposed study and any future project (if found feasible) will be based on a market (or builder) driven process for the reviewing, selecting, planning and adopting of new and innovative technologies.

**Project Steps**

The project has three major steps over two phases. The phases coincide with the different funding timeframes by the two major sponsors: NRCan and FCM-GMF:

*Step 1: Options to be Considered*

A full range of energy efficiency and innovative energy conservation and renewable energy technologies will be reviewed and evaluated. Technologies will be grouped into five main system elements: building design (such as maximizing passive solar heating through windows), mechanical systems (such as placing cooling units in the upper floors to let the heavier cold air fall to lower levels), electrical systems (such as devices to reduce demand during potential brown-outs), renewable energy (such as solar thermal and photovoltaic, and geothermal heating and cooling), and integrated community energy (district heating and cooling, including community amenities such as parks and recreation centres). Additional energy conservation and emission reduction opportunities from better urban design, such as reduced vehicle trips, and more pedestrian-oriented access to shopping, parks and schools will be identified and explored.

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**Step 2: *Methods to be Employed***

The proposed study will begin with a comprehensive survey of potentially suitable technologies from a number of sources, domestic and international, to generate an initial list of technologies for consideration.

The second task will utilize the combined experience of a small group of energy consultants to carry out an initial review to bring forward a short list of 12-15 candidate technologies for further consideration. Strong focus will be placed on information sharing to facilitate decision making by the expert group.

The next task will involve a series of workshops to bring together the home builders, developers, energy experts and technology providers to fully explore the potential fit between the short-listed technologies and the development market conditions. Issues, concerns, or potential technology enhancements will be discussed and documented. Technologies that are the most ready for market up-take will be identified as the first stage of introduction, followed by technologies nearly ready for market and then technologies that still require enhancements and support.

The final task of the study will involve the development of appropriate partnerships and implementation plans, in a phased approach, for the identified technologies in order of market-readiness.

**Step 3: *Documentation - The Results Expected***

The output of the proposed study will include a number of valuable tools for future new home developments:

- A survey of suitable energy efficiency and renewable energy technologies;
- Experts' evaluation of the technologies and a measure (and the circumstances) of fit with the development industry;
- A list of builder selected technologies for implementation; and
- Possible business models and implementation processes for the various technologies.

**Project Team**

City of London Environmental & Engineering Services staff would provide overall project management support for the Feasibility Study. Planning & Development staff would provide input on the study from the point of view of municipal planning and environmental stewardship, and would also ensure the proposed study supports the City's overall *Placemaking* project. Both departments would contribute to the knowledge of the local development industry, technical specialists and municipal requirements.

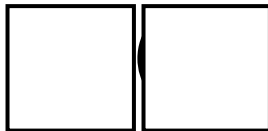
A technical consulting team will be retained. NRCan staff have undertaken similar projects with a number of specialists that would be available to work on this project. These details would be discussed with NRCan based on the details in the contribution agreement.

Important local elements of the Project Team would be fulfilled through staff involvement from:

- London Home Builder's Association (LHBA)
- London Hydro
- Canada Mortgage and Housing Corporation (CMHC)
- Ontario Power Authority (OPA)

**Project Timing & Funding Sources**

NRCan's project team proposes a two phased approach to the project. Phase 1 would be scheduled to start on, or about, June of 2006, timed to coincide with the *Placemaking* design charette scheduled for that time period and funded by the NRCan grant. Phase 2 would be scheduled to start in September 2006 and would be funded by the Green Municipal Fund grant. The feasibility study is expected to take about 18 months. The general timeframe is identified below:



Project Activity		Timeline
Background		February – May
	Detailed application to Green Municipal Fund	March 7, 2006
	City issues proposal to NRCan TI Buildings Program (assisted by SAIC Canada, a technical specialist consulting firm)	Late March
	NRCan reviews the proposal and prepares Contribution Agreement	April
	Sign-Off on NRCan Contribution Agreement and implementation of any administrative and technical requirements	May – June
Phase 1		June – August
	<i>Placemaking</i> design charette	June
	Step 1: Options to be Considered	July – August
	Tentative date of approval by FCM – GMF	September
Phase 2		Sept. 2006 – July 2007
	Step 2: Methods to be Employed	Sept. 2006 – March 2007
	Step 3: Documentation - The Results Expected	April – June
	Final Project Reporting	Summer
	Report to Municipal Council – Outcomes and Next Steps	September

Phase 1 would be funded by NRCan. A separate contribution agreement between the City of London and NRCan would be required to receive this funding. Should the FCM-GMF Application be accepted, all project expenses incurred from February 10, 2006 onwards would be eligible as project costs. Meeting the March 7 deadline would mean that Application’s acceptance would be known by September 2006.

It is our understanding that the contribution agreements with both NRCan and FCM would be structured in a manner that would allow the City of London to stop work on the Project with no financial penalty. This is due to the funding mechanism employed by both contribution agreements, that being one that reimburses the City after expenses have been incurred.

The overall proposed budget for the Feasibility Study is \$200,000 as identified below.

Proposed Partner Funding Sources - Financial	Funding Requested	Percentage
Government of Canada – NRCan TI Buildings Program	\$90,000	45%
FCM Green Municipal Funds	\$90,000	45%
*City of London – Planning & Development - <i>Placemaking</i> Project	\$10,000	5%
*City of London – EESD – Air Quality/Climate Change Awareness	\$10,000	5%
<b>Total Budget</b>	<b>\$200,000</b>	

\* funds approved in 2006 Budget

**Stage 2: Possible Next Steps – Energy Efficient Neighbourhoods Combined with Placemaking Principles**

The possible next steps to this Feasibility Study include preliminary design and detailed designs for a sub-division designed under the principles of Placemaking and using the tools developed in the proposed study that would showcase a trend-setting livable and sustainable community. The resulting project would demonstrate that Placemaking principles and energy conservation principles can work in tandem to create the communities of the future.

The role of the various project partners would be developed and defined during the Feasibility Study. While it is too early to describe in detail the future project, it is useful to briefly note the vision of the project when successfully implemented. From an environmental perspective, this showcase community

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would feature trend-setting energy-efficient homes, with heating and cooling comfort provided by an integrated community energy system and powered by innovative renewable energy solutions. Positive environmental impact would include dramatically reduced greenhouse gas and smog-forming emissions, cleaner, healthier air inside and outside the homes and better management of the limited fossil fuel resources. The homes will go beyond current building standards. By the latter stages, project homes are expected to achieve greenhouse gas reductions of 80% compared to conventional new subdivisions. Other key placemaking fundamentals that would be designed into the vision to ensure a strong sense of community would include an over-arching design concept, high quality pedestrian-oriented street environments, effective and connected public spaces that support formal and informal community interaction, high quality architectural design, accessible and human scale recreational amenities and community focal points that community residents can identify with.

**CONCLUSIONS:**

This project represents a unique opportunity to obtain \$180,000 of third-party funding, with no additional financial commitment required from the City of London, for a project that will highlight London’s commitment to smart growth, innovation, and environmental protection. This project also builds upon the City of London’s strong relationships with the London Home Builder’s Association, the Federation of Canadian Municipalities, and Natural Resources Canada. The Feasibility Study represents a crucial step towards becoming a national showcase for innovative new housing development.

**ACKNOWLEDGEMENTS:**

This report and background details was prepared with the assistance from Jamie Skimming, P.Eng., Manager, Air Quality; Jay Stanford, Division Manager, Environmental Programs & Customer Relations; Pat McNally, P.Eng., Director, Water, Environment & Customer Relations; Terry Grawey, Planner, Planning Division; Lou Pompili, Planner, Planning Division; and Rocky Cerminara, Director Building Control and John Fleming, Manager – Implementation, Planning Division.

City staff wish to acknowledge the efforts of Lois Langdon, London Home Builder’s Association; Bill Wong, SAIC Canada; and Jamie Glouchkow, NRCan for their participation and assistance.

<b>SUBMITTED BY:</b>	
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<b>RECOMMENDED BY:</b>	
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c.c. Lois Langdon, London Home Builder’s Association  
 Bill Wong, SAIC Canada  
 Jamie Glouchkow, NRCan