



Corporate Report

NO: R273

COUNCIL DATE: DECEMBER 17, 2007

REGULAR COUNCIL

TO: **Mayor & Council** DATE: **December 12, 2007**
FROM: **General Manager, Planning and Development** FILE: **5280-11**
SUBJECT: **Memorandum of Understanding - Semiahmoo Town Centre
Integrated Energy Master Plan**

RECOMMENDATION

It is recommended that Council:

1. Receive this report for information;
2. Authorize the Mayor, on behalf of the City of Surrey, to sign a Memorandum of Understanding with BC Hydro (attached as Appendix I) for the development of an Integrated Energy Master Plan for the Semiahmoo Mall area of the Semiahmoo Town Centre (see Appendix II); and
3. Direct staff to report back to Council at key milestones in the development of the Integrated Energy Master Plan.

INTENT

The purpose of this report is to:

1. Update Council on the development of community energy studies and the integration of sustainability components in Phase II of the Semiahmoo Town Centre Neighbourhood Concept Plan ("NCP") process;
2. Present a proposal for the development of an Integrated Energy Master Plan for the Semiahmoo Mall area of the Semiahmoo Town Centre; and
3. Seek Council's approval to enter into a Memorandum of Understanding ("MOU") with BC Hydro and other interested stakeholders to partner on the development of and, if shown to be feasible, the implementation of AN Integrated Energy Master Plan.

POLICY CONSIDERATIONS

The City is committed to making Surrey a "complete community" at the City level and within the various town centres and neighbourhoods. A complete community offers a wide range of business opportunities, local employment, housing choices, convenient services and viable alternatives to the use of private automobiles for transportation. The complete community concept also requires consideration of safety, a people-friendly built environment and energy efficiency. These policy directions were all addressed in the development of the Semiahmoo Town Centre Concept Plan, adopted by Council in September of 2006.

In addition to energy conscious community planning, the City also supports building design that makes communities more energy efficient and supports all efforts to promote energy conservation and alternative energy sources which are environmentally friendly and sustainable.

BACKGROUND

On September 25, 2006 Council considered Corporate Report No. C018 and, subsequently, endorsed the Stage 1 (Land Use Concept) component for the updated Semiahmoo Town Centre Plan. The process included the development of sustainability guidelines as part of the Stage 2 component of the Plan, which is currently underway. The Plan's land use concept supports a number of inherent sustainability principles. These features include compactness, a higher density and mix of land uses, walkability and transit-orientation. The City will develop a "Made in Surrey" Sustainability Checklist under the City's Sustainability Charter.

Throughout 2007, the City has also been working on a number of programs and studies with the provincial Ministry of Energy, Mines and Petroleum Resources (MEMPR), the Community Energy Association and major utilities, including Terasen and BC Hydro, to promote energy efficiency and the use of alternative energy sources. In one of these studies, a Community Energy Plan for the City Centre, the promotion of buildings with high-energy efficiency was recommended, and the potential benefits of district heating systems that could operate with a variety of alternative fuel sources were identified.

BC Hydro has subsequently approached the City, in the context of their community sustainability initiatives, to work with Surrey as one of three pilot communities in the Province to create an Integrated Energy Master Plan. After discussions with BC Hydro staff regarding their criteria for study area selection, the proposed redevelopment of the Semiahmoo Mall in the context of the Semiahmoo Town Centre Plan was identified as having the appropriate urban form and scale for an energy master plan pilot project.

City staff has subsequently discussed this concept with the owner of the Semiahmoo Mall, the largest single property in the area. The owner is interested in participating in this study process.

DISCUSSION

The interest in an Integrated Energy Master Plan pilot project, which incorporates a district heating and cooling system, is based on concerns over energy security and Greenhouse Gas (GHG) emissions that are related to climate change. The City has signed on as a supporter of the Province's Climate Action Charter, which calls for significant reductions in GHG emissions. A district heating and cooling system, which is based on a water distribution system, is flexible and allows a wide range of alternative energy sources to be used to heat or cool the water in the system, such as geoexchange, solar, wind, biomass and, where necessary, fossil fuels such as natural gas. If conventional systems, such as individual natural gas lines and electric baseboard heaters, continue to be installed in Surrey's town centres, such as the Semiahmoo Town Centre, it will be extremely difficult to retrofit a district heating system in the future.

Under the proposed MOU, BC Hydro and the City would agree to work together to promote high performance buildings and energy efficiency, reduce the use of electricity and maximize the use of alternative energy sources. The proposed Integrated Energy Master Plan would investigate the feasibility of a district heating system, including the potential for energy from sources such as wind, solar, natural gas, geoexchange, biomass and waste heat from businesses and municipal operations. The principle benefits of the MOU for the City include:

- Cost-sharing with BC Hydro on a technical, financial and institutional (governance) feasibility study. It is anticipated that this study would cost approximately \$150,000 with BC Hydro providing 50% of this amount and the City and other funding partners being responsible for the remaining 50%. Should Council endorse the MOU, funds are available in the 2008 budget to support the work associated with the MOU;
- Subject to the project being demonstrated to be feasible, BC Hydro would fund up to \$100,000 per year for up to two years for a project manager to oversee the implementation of the Integrate Energy Master Plan. The City and land owner would be responsible for the other costs of implementing the Plan; and
- BC Hydro would provide technical advice and assistance to the City.

The developer of the proposed study site would be eligible for tools, resources and financial incentives to assist with the design and construction of the high performance buildings that would be necessary to complement an efficient community energy system. Recent trends in marketing indicates that there is a growing demand for such "green building" features among prospective buyers and the developer has expressed an interest in partnering with the City and BC Hydro on the development of the Plan.

If the study demonstrates that the Integrated Energy Master Plan is feasible, the City would be expected to support the implementation of the Plan by considering the adoption of policies, zoning by-law amendments, design guidelines and other mechanisms that are within its legislated mandate and consistent with City policies.

The system would be designed in such a way that it could be expanded beyond the Semiahmoo Mall redevelopment site outwards to the entire Semiahmoo Town Centre area and into White Rock's town centre area.

Staff is continuing to work on the completion of the Stage 2 Component of the Semiahmoo Town Centre Plan. Philips Farvaag Smallenberg Consultants are working with the City to refine the final urban design and streetscape guidelines for inclusion in the final Plan document. Urban Systems has been retained to undertake detailed work with regard to the servicing infrastructure, financial and transportation components of the Plan. As well, Planning and Development and Engineering Department staff, along with our consultants, have been working with TransLink staff in order to determine the configuration of the improvements to the transit/bus network and lay-over facilities in the area, which will result from the South of Fraser Area Transit Plan. Unfortunately, completion of the transportation component of the Stage 2 has been delayed pending the results of the 2031 South Surrey Transportation Sub-Area Model. This data has recently been received in final form, and a Terms of Reference has now been completed to undertake, in cooperation with TransLink, a Semiahmoo Town Centre Area Transportation Study, which is expected to be completed by March of 2008. Staff will be reporting to Council with a final recommended Plan for public consultation in spring of 2008.

CONCLUSION

As a pilot community in support of BC Hydro's sustainable communities initiatives, the City has the opportunity to cost share in a technical feasibility study for an Integrated Energy Master Plan for the Semiahmoo Town Centre area and to receive funding for a project manager to implement the Plan if it is shown to be feasible. The Integrated Energy Master Plan is consistent with Council's direction to promote sustainability in the study area and supportive of the City's commitment to the Province's Climate Action Charter.

Jean Lamontagne
General Manager
Planning and Development

MA/kms/saw

Attachments:

Appendix I - Memorandum of Understanding (MOU)

Appendix II - Semiahmoo Town Centre NCP Area



reliable power,
at low cost,
for generations



Memorandum of Understanding

BC Hydro and the City of Surrey wish to enter into a partnership agreement to work toward the successful development and implementation of a sustainable neighbourhood plan at Semiahmoo Town Centre which is located at the North West corner of 152nd street and 16th Avenue in the City of Surrey, and further detailed in Appendix A. This Memorandum of Understanding (MOU) outlines the understandings between BC Hydro and The City of Surrey (Surrey) relating to the design; financial, technical and institutional feasibility assessment; development and construction of an integrated energy system constructed in association with the redevelopment of Semiahmoo Mall (The Project). The MOU has been prepared to describe the general understandings regarding certain concepts and undertakings to be included in future agreements that may be entered into between BC Hydro and The City of Surrey.

Background

City of Surrey policies, as expressed in the Official Community Plan, strongly support the principles of sustainable development, energy efficiency and the implementation of alternative energy systems, where feasible. The City of Surrey is currently undertaking a review of the Semiahmoo Town Centre Plan, which is exploring higher densities, increased transit service, pedestrian orientation and a mix of land uses to promote the vitality and sustainability of this area. In the Semiahmoo Town Centre, City Council has expressed a desire that sustainability and district heating be considered in the development of the Neighbourhood Concept Plan. The Semiahmoo Mall is a 20+/- acre property in single ownership, which is the major commercial focus of the Town Centre area. The landowner is considering redeveloping the site from a low density shopping mall to a higher density, mixed use development containing commercial, residential and entertainment uses and community amenities.

BC Hydro's purpose is to provide low cost, reliable power for generations. In support of this purpose, BC Hydro is working with municipalities and the design and development industry to develop and implement comprehensive integrated neighbourhood energy plans that incorporate high performance buildings and district energy systems supplied by a variety of energy sources to result in a dramatic and permanent reduction in electricity intensity in British Columbia.

BC Hydro and Surrey wish to partner together in The Project toward achieving the following goals for The Project:

- High Performance Building design and construction achieving a minimum of 25% more efficient than Model National Energy Code for Buildings
- Development of an integrated energy system for The Project that results in a significant net reduction in total energy, electrical energy and greenhouse gas emissions by incorporating the following principles:
 - Maximize the viable use of waste heat

- Minimize the use of electric baseboard heating
- Maximize the use of renewable energy supply
- Incorporate smart, flexible distribution through a district energy system
- Develop the system to deliver reliable energy to owners and occupants at a low or competitive cost
- Design the system to enable its integration into a future larger community utility system
- The system will incorporate interconnectivity to accommodate for future growth to adjacent properties in the Semiahmoo Town Centre area

In working in partnership toward achieving these goals, BC Hydro will provide the following:

To The City

1. Co-fund up to 50% of the cost of an investment grade feasibility study, subject to BC Hydro approval, to assess the technical, financial and institutional viability of the integrated energy system. The City may partner with other organizations, such as the developer of the site, to fund their 50% of the cost of the study. The terms of reference for the study will be mutually agreed to between the City of Surrey and BC Hydro. The selection of consultants will be the joint responsibility of the City of Surrey and BC Hydro. The City of Surrey will manage the RFP process and the consultant during the study process. The resulting study will be owned by both the City of Surrey and BC Hydro.
2. Subject to financial and technical feasibility and BC Hydro Cost/Benefit analysis based on the outcome of the feasibility study described in 1 above, BC Hydro will fund up to \$100,000 toward the annual salary of a Project Manager, and renewable for 1 year to implement the Project. The Project Manager will be employed by Surrey. The terms of reference and qualifications for the Project Manager will be mutually agreed to between the City of Surrey and BC Hydro.
3. Technical advice and assistance will be provided as needed and as resources are available.

To The Developer

1. Subject to the technical and financial viability of The Project, and BC Hydro Cost/Benefit analysis, developer of new commercial buildings within The Semiahmoo Mall, including mixed use developments, will be eligible to receive tools, resources and financial incentives to assist with the design and construction of high performance buildings including reducing the incremental capital cost to the developer associated with connecting to the district energy system, through the Power Smart High Performance Building Program. Capital incentives will be calculated based on the total net electrical energy savings of the system and buildings as compared with conventional design.

In working in partnership with BC Hydro, The City of Surrey will undertake the following:

Within existing statutory responsibilities, promote policy instruments, bylaws, guidelines and/or zoning other mechanisms for new and redevelopment projects that will support BC Hydro's and the City of Surrey's mutual goals to achieve a dramatic and permanent reduction in electricity intensity by enabling, encouraging, providing incentives or requiring energy efficient neighbourhood design, standards and practices.

Each party is executing this MOU to confirm its intention to proceed with the good faith negotiations referenced in this MOU in an effort to enter into the binding and enforceable agreements contemplated in this MOU.

BRITISH COLUMBIA HYDRO
AND POWER AUTHORITY

CITY OF SURREY

Per: _____
(Authorized Signatory)

Per: _____
(Authorized Signatory)

Name: _____

Name: _____

Title: _____

Title: _____

Date: _____

Date: _____

