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## CITY OF KELOWNA

# MEMORANDUM

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**Date:** March 24, 2004  
**File No.:** 0360-20 EMC

**To:** City Manager

**From:** Energy Management Committee (EMC)

**Subject:** 1 ) **Energy Management Committee Program Update**  
2) **Application for participation in a Community Action on Energy Efficiency (CAEE) Pilot Project**

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### **RECOMMENDATION:**

THAT Council receives an update from the Energy Management Committee (EMC) on past and current initiatives;

AND THAT Council endorses the City of Kelowna EMC Sustainable Building Pilot Project Plan and Letter of Interest applying to be the Heartland participant in the BC Ministry of Energy and Mines and Natural Resources Canada joint pilot initiative entitled "Community Action on Energy Efficiency" (CAEE);

AND FURTHER THAT Council approves a budget amendment to provide the necessary funds to allow the EMC to contribute its planned share under the cost sharing agreement, with Aquila Power Sense and the CAEE Pilot Project, up to a maximum of \$40,000 from the Electrical Utility Reserve.

### **BACKGROUND:**

The City's EMC (along with other municipalities) have been contacted by the British Columbia Ministry of Energy and Mines (MEM) to consider the submission of an application to participate in a new energy efficiency pilot program, being fronted by the BC Provincial Government Ministry of Energy and Mines (see attached application). This program, referred to as the CAEE Program (Community Action on Energy Efficiency) offers funding assistance aimed at supporting the implementation of energy efficiency projects related to buildings, houses, equipment, energy infrastructure, and vehicles within those communities that have an established Community Energy Plan, an Air Quality Management Plan or any other community supported plans which highlights priorities of energy efficiency projects.

As Council is aware, the EMC has been active in many areas related to energy efficiency within its operations and facilities and has taken the lead to address sustainability criteria for contractors, vendors and consultants working on all new and retrofit of City properties (see attached list of initiatives). Total kilo-watt hours (kwh's) saved to date since 1995 from all City initiatives is **3,785,392** representing **\$167,655.01** at today's current rates. Rebates received from Aquila's PowerSense since 1995 is **\$151,056.07**. The EMC now wants to complement this approach by extending sustainability partnership opportunities into the Community, beginning with this pilot project opportunity.

After reviewing project possibilities related to upcoming development, the EMC contacted Mr. David Dill from the Brandt's Creek Crossing Development Group to see if they would be interested in working with the City and participating as the CAEE pilot project. Their response was overwhelmingly positive; in fact they were enthused that the City would consider them and believe only good things will arise out of this pilot project.

The EMC, on behalf of the City with Councils approval, will submit an application that identifies this project and its potential as its pilot submission from a community partnership and participation perspective. Following approval of the application the EMC will work collectively with the developer and Aquila to develop an agreement that identifies energy management opportunities as the project moves forward. The EMC will report back to Council once more information becomes available on the application submission for this initiative.

The CAEE deadline for submissions is **March 31, 2004**. The Ministry of Energy and Mines will announce the successful candidate by the middle of May, 2004.

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Don Degen,  
EMC Chairman

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Rod Carle,  
Energy Management Coordinator

cc     EMC Committee  
         Director of Finance and Corporate Services  
         Director of Works and Utilities

Attach.

## **Energy Management Initiative Locations:**

### Civic Properties Division:

City Hall  
Rutland & Memorial Arenas  
Library  
Library Parkade  
WWTF Admin Office  
Main Fire Hall  
RCMP Detachment  
City Yard  
Parkinson Rec. Centre  
Prospera Place  
Chapman Parkade  
Rotary Arts Centre  
Mission Sports/Capital News Centre

### Electrical Division:

Streetlights

- Conversion of all streetlights to H.P.S.
- L.E.D. Christmas Lights
- High "E" Electric Motors (Various Locations)

### Transportation Division:

Traffic Signal Lights

- Converted all traffic intersections lights to L.E.D. in the Aquila Service Area
- Solar Ped Signals

### Water & Waste Division:

Water and sewer telemetry system improvements

Water system telemetry in the Mission:

- These types of "Smart" controls allow the City to provide individual premise peak shaving along with electrical system peak shaving.
- Process Changes at WWTF

Environmental Division

- Partnered with Regional District of Central Okanagan – Re: Air Quality Management Plan
- Member of FCM, ‘ Partners for Climate Protection”
- Completion of Greenhouse Gas Emissions Inventory (City owned facilities)
- New idling policy for City of Kelowna Vehicle Fleet

**Current EMC Activities:**

- All Traffic Light heads in the City’s Electrical Service Area are currently being converted to L.E.D. heads.
- City Hall HVAC system
- WWTF – Reviewing implementation schedule on installing an Ultra-Fine Bubble Aeration System
- WWTF - Potential Installation of Polymer Mix Values
- WWTF – Heating and Ventilation Improvements
- Parkinson Rec. Centre - New dehumidification system, update interior lighting and install flush control urinals
- Embarking on a community energy/greenhouse gas baseline inventory (which is the foundation for the development of a community energy/greenhouse gas reduction plan)
- Working with Community Futures Development Corporation of Central Okanagan – Re: Community Alternative Energy Development Initiative
- Working with Ministry of Energy & Mines – Re: Community Action of Energy Efficiency Pilot Program



Andrew Pape-Salmon  
Senior Policy Advisor, Energy Efficiency and Building Code  
Ministry of Energy and Mines, Alternative Energy Policy Branch  
PO Box 9314, Stn Prov Govt  
4<sup>th</sup> Floor Blanshard Street  
Victoria, BC V8W 9N1

31 March 2004

Dear Mr. Pape-Salmon,

**Community Action on Energy Efficiency (CAEE)  
Letter of Interest**

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As one of the fastest growing urban areas in BC, the City of Kelowna must necessarily focus its budget and resources on expansion of City services and facilities for its citizens and provide quality and timely services to private project developers. Over the years, the City has put structures and mechanisms in place to address environmental concerns and cost management. However, the growth rate has overwhelmed the City's forecast for service in recent years and moving the environmental and efficiency agenda forward to encompass sustainable development has been delayed. The CAEE program, as presented in the 20 February 2004 letter, has created the opportunity to provide the incremental resources needed to complete two major start-up steps in the City's *Interim Sustainable Building Action Plan (Action Plan)* (see Attachment A).

The City of Kelowna's Energy Management Committee (EMC) is pleased to submit this Letter of Interest for the CAEE pilot program. The EMC was formed in 1995 by the City's Electrical, Civic Properties and Water and Wastewater operating departments and is supported both technically and financially by Aquila Networks Canada BC (Aquila), through its umbrella demand-side management program Power Sense.

The strategy guiding the City's planning focuses on the interactions between environmental stewardship, air quality, greenhouse gas and energy conservation in the built environment. The City is committed to providing a livable community for its citizens and has accomplished the following:

- 2000 - with the Regional District of Central Okanagan, has implemented the Air Quality Management Plan;
- 2001 - joined the Federation of Canadian Municipalities "Partners for Climate Protection" (PCP) program;
- 2003 - completed the greenhouse gas emissions inventory for City-owned facilities;
- 2002 - Council endorsed the concepts of the *Interim Sustainable Building Action Plan*
- 2004 - the City's Environment Office is working with privately owned facilities to complete emissions inventory; and
- 2004 - the City's Environment Office is establishing a community outreach plan under the PCP program.

***Kelowna Sustainable Building Pilot (Pilot Project)***

The EMC has an outstanding assignment from the Mayor and City Council, as a result of the Council's endorsement of the *Action Plan*. The EMC must obtain input from all stakeholders regarding how the City would implement and enforce sustainable building development and present a draft Primer for Sustainable Buildings in Kelowna. A plan for the Kelowna Sustainable Building Pilot Project is Attachment B to this Letter of Interest. The primary objectives of the Pilot Project are to:

- (1) Inject the resources needed to gain momentum to move from planning for sustainability into pilot City and private sector development projects and *Action Plan* implementation activities;
- (2) Fulfill Council's 2002 request to work with City staff and the development community to define a sustainable building for Kelowna and to prepare amendments to the City's building code; and

- (3) Take advantage of the CAEE support for additional resources to pilot
- a Sustainable Building outreach initiative to the development, professional and contractor communities, and
  - a joint effort of the City and its electricity supplier, Aquila Networks Canada (British Columbia) Ltd. (Aquila) with a property owner with a major development project underway in the City, to determine specific measures and criteria for sustainable buildings in Kelowna.

The Pilot Project comprises two phases. The first phase is a stakeholder consultations in workshop format to develop the preliminary description and definition of a sustainable building located in Kelowna. Existing codes, standards and regulations will also be examined and suggested amendments recorded. The second phase, a joint effort, will identify and define the measures and practices that can make a new building sustainable in the City. Together with the developer, the City and Aquila will focus on the first project of a large site development underway, a ten storey tower with condominiums around the base. Measures and practices will be evaluated in terms of resource use, life cycle costs, avoided costs, and impact on development design, materials, and costs. Those measures will be implemented by the pilot project partners.

From the information supplied to and collected during Phases 1 and 2, the City will draft a Primer for Sustainable Buildings. The City also proposes to prepare a Pilot Project report, presenting the process, information, and results, and to submit the report to the CAEE for input into their programming.

- Phase 1 – Sustainable Building Outreach

The first phase is an outreach to developers, architects, engineers, and contractors to begin discussions about sustainability and buildings and review codes, regulations and other requirements that pertain to the BC building industry. This phase will (1) draft a definition of a sustainable building in Kelowna, (2) identify and clarify codes and standards that are perceived barriers to the development of sustainable buildings, and (3) identify changes to codes, or strategies that can address code conflicts with the development of sustainable buildings.

Records from the sessions will be transcribed into a definition of a sustainable building and a description of the common ground for developers, the City, and sustainable buildings. Both will be input to the work of City staff and heads of departments as they prepare draft code amendments and a sustainable building definition for consideration by the Mayor and members of City Council.

- Phase 2 – Building Primer Case Example

The second phase of the Pilot Project will be led by EMC, in partnership with Aquila and the Cascadia Pacific Development Corporation. Please see Attachment C for partner descriptions. The specific development project is Brandt's Creek Crossing, a new mixed-use community to be developed just north of downtown Kelowna. Brandt's Creek Crossing won the Mayor's 2003 Environmental Award for Most Innovative Business Initiative for rehabilitating the former CNR railyards. The lands have been subdivided and rezoned to a mixed-use neighbourhood incorporating industrial, office, commercial, residential lots and a hotel site.

Preliminary discussions with the partners suggest that the timeline for the design and construction of the first building project, a ten storey office tower and condominiums, coincides with the CAEE's goal for concrete energy efficiency and savings results before 2007.

During this phase of the Pilot Project private sector developers, building technology specialists, sustainability practitioners, utility energy efficiency experts, and consultants will work with the project partners and other government representatives to identify and select the measures and practices suitable for sustainable buildings and facilities in Kelowna. The primer will provide the building industry and municipalities with the tools to put sustainable building ideas into action. It will also address the wealth of existing and scattered information.

Together, Phases 1 and 2 of the Pilot Project will:

- collect critical input and support from the development community,
- assist the City to complete its Sustainable Building Action Plan and draft amendments to City codes and bylaws that are, indeed, barriers to sustainability,
- prepare a draft Primer to Sustainable Buildings for the City of Kelowna, and
- implement pilot design and/or building improvements in a major new development in Kelowna

### *Energy and Efficiency Savings*

The City's partner, Aquila, through its PowerSense program is able to provide demand side management expertise and analysis. The availability of PowerSense incentives creates an opportunity for CAEE to go after incremental efficiency savings, those savings available beyond the utility's normal avoided cost. A preliminary estimate of the savings potential that can be captured by Aquila incentives is 125 MWh. Additional funding from CAEE will enable the implementation of measures that otherwise would not occur at this time and are estimated to capture an additional 20 percent savings.

### *Budget and Costs of Kelowna Sustainable Buildings Pilot*

The table below summarizes the budget and allocation for the Pilot Project. Please see Attachment B for details.

SUMMARY Phases 1 and 2				Allocation			
2004/05		Other	Budget	City of Kelowna	Aquila	CAEE	TOTAL
Project People	\$40,000		\$40,000	\$15,000	\$0	\$25,000	\$40,000
Materials - publishing	\$5,000	\$1,000	\$6,000	\$1,000	\$5,000	\$0	\$6,000
Incentives	\$0		\$0			\$0	\$0
Sub-total	\$45,000	\$1,000	\$46,000	\$16,000	\$5,000	\$25,000	\$46,000
				35%	11%	54%	
2005/06							
Project People	\$30,000		\$30,000	\$15,000	\$0	\$15,000	\$30,000
Materials - publishing	\$5,000	\$1,000	\$6,000	\$1,000	\$5,000	\$0	\$6,000
Incentives	\$70,000		\$70,000		\$35,000	\$35,000	\$70,000
Sub-total	\$105,000	\$1,000	\$106,000	\$16,000	\$40,000	\$50,000	\$106,000
				15%	38%	47%	
TOTAL		Other	Budget	City of Kelowna	Aquila	CAEE	TOTAL
Project People	\$70,000	\$0	\$70,000	\$30,000	\$0	\$40,000	\$70,000
Materials - publishing	\$10,000	\$0	\$10,000	\$0	\$10,000	\$0	\$10,000
Incentives	\$70,000	\$0	\$70,000	\$0	\$35,000	\$35,000	\$70,000
Sub-total	\$150,000	\$0	\$150,000	\$30,000	\$45,000	\$75,000	\$150,000
				20%	30%	50%	

### *Bridging Mechanisms*

The deliverables from the Pilot Project will assist other municipalities in BC to take affordable and effective steps towards sustainability in their communities. The outreach process report and collected stakeholder and process information will inform City Hall's throughout the province about what can be done. Importantly, to the transfer of the learning and information from the Pilot Project, participants in the Pilot Project will be available to present the information package, including the code and bylaw amendments and the primer to others and answer questions. Please see Attachment D for further discussion of replicability of the results.

The City of Kelowna and its partners Aquila PowerSense, and Cascadia Pacific Developments, are pleased to submit this Letter of Interest for your consideration.

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Name  
Municipal Councillor  
City of Kelowna

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Rod Carle  
Electrical Manager  
City of Kelowna

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Brian Parent  
PowerSense Manager  
Aquila Networks Canada