
CITY OF KELOWNA

MEMORANDUM

Date: April 20, 2005
File No.: 0360-20 EMC

To: City Manager

From: Energy Management Committee

Subject: Energy Management Committee Update

RECOMMENDATION:

THAT Council receives for information an update from the Energy Management Committee on activities related to the Community Action on Energy Efficiency Project (CAEE) on the City of Kelowna's 'Sustainable Building Pilot Project';

AND THAT Council endorses the Mayors Environmental Actions items which will be delivered during the Mayor's 2005 Environmental Expo scheduled for May 24, 25 & 26, 2005 (see attached).

BACKGROUND:

CAEE UPDATE

"Sustainability" describes the ability to meet the City's present needs without compromising the ability of future generations to meet their needs. "A sustainable building" (also referred to as "resource-efficient" or "green" building) is the notion of designing, constructing, and operating buildings and landscapes in a manner that minimizes environmental impacts.

In August 2002, the Energy Management Committee (EMC) developed a Proposed Sustainable Building Action Plan for the City of Kelowna. The City has worked on resource use efficiency with others, such as Water Smart and our PowerSense Partner, FortisBC. This work continues today and through the Community Action on Energy Efficiency pilot project (CAEE) we are also working with Natural Resources Canada and the provincial Ministry of Energy and Mines to move our Sustainable Building Action plan ahead.

The Sustainable Building Pilot Project, sponsored by the CAEE, began in September 2004 as City staff prepared to work with the development community to define sustainable building for Kelowna and to identify any amendments needed to the City's development planning practices or building code. The pilot project is a joint effort of the City and its electricity supplier, FortisBC. The Pilot Project hosted its first workshop on March 3, 2005 as part of the City of Kelowna's 'Sustainable Building Pilot Project' and the preliminary feedback from participants have been over whelming and we are hoping to add another sponsor to the project. (Workshop information is on City's web page, www.kelowna.ca, click on current projects and then click on "Sustainable Building Pilot Project.")

The workshop format was unique by having a round table discussion with 20 professionals at the table and 20 other support professionals in the audience asking questions on any of the topics discussed and then having an opportunity to add comments by end of day. Make up of the professionals were from engineering firms, planning professionals, architects, gas, electric & water utilities, general contractors, communication groups, cement companies, and other business groups, as well as The Urban Development Institute, The Home Builders Association, Central Okanagan Regional District, Natural Resources Canada and Ministry of Energy & Mines.

Upon completion of Workshop 1, the EMC identified three immediate action items:

1. Draft a general “Sustainable Building” policy notes and findings from the first workshop for City Council to adopt (see attached draft interim sustainable policy notes and preliminary findings report) that will provide an early direction and a clear signal to citizens and the development industry of the City’s intent to move quickly to mandating sustainable building development. (Finalization of a policy statement, along with a comprehensive sustainable building plan will occur once the pilot project has been completed and staff has had a chance to evaluate the results.)
2. Facilitate a Sustainable Building Trade Show along with a list of Mayor’s Action Items (see attached) as part of the Mayor’s Environmental Expo in May. Ministry of Energy and Mines and Natural Resources Canada announcements will be integrated into the Expo as well.
3. Integrate the Sustainable Building strategy and the City’s Centennial by developing a ‘Hundred Year Plan’ for the City of Kelowna. Recommendations for this will come to Council under a separate report at a later date.

With the conclusion of Workshop 1, the EMC is excited with the progress to date. The next phase of the Sustainable Building Pilot Project, Phase 2 will reach out to the broader building-owner, tenant and operations manager community, all internal divisions, as well as interested residents in Kelowna to participate in a daylong design charette. The charette will include results from Phase 1 and live results from a current Kelowna development.

The EMC acknowledges the efforts of current and potential future project partners:

- The City of Kelowna
- FortisBC
- Terasen Gas
- UBC O
- Natural Resources Canada
- BC Ministry of Energy and Mines

MAYOR’S 2005 ENVIRONMENTAL EXPO

One of the messages the EMC heard loud and clear from all participants at it’s first Community Action on Energy Efficiency Project (CAEE) workshop is that: *The City needs to send a “Green Message” now endorsed by Council in order to let the public know this local government supports sustainability, not only in building, but in all sectors (Government, Transportation, Environment, Planning and Utilities) throughout this City.*

The EMC believes that the upcoming Mayor's Environmental Expo May 26, 27, & 28, 2005 and the City's Centennial Birthday on May 5, 2005 are the best time to get this "GREEN MESSAGE" out to the community.

The Mayor's Action Items recommend four broad actions with a separate statement for each one and a series of strategies that can be completed and/or delivered by staff in order to make Kelowna a "GREENER" place to live. These actions are consistent with the recently Council approved 2004 Strategic Plan.

If supported by Council, the EMC along with the City's Environmental Division will work immediately with the City's Communication Manager on finalizing the City's "GREEN MESSAGE" which form part of and become the key message of Mayor's opening remarks.

Don Degen,
EMC Chairman

Rod Carle,
Energy Management Coordinator

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

Attachments: The Interim Sustainable Policy Notes & Preliminary Findings - DRAFT
 The Mayor's 2005 Environmental Expo Action Items - DRAFT

"Draft"
"Draft"



**INTERIM
SUSTAINABILITY POLICY NOTES
AND
PRELIMINARY FINDINGS**

DRAFT Prepared by:

Willis Energy Services Ltd.

April 1, 2005

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ELEMENTS OF A SUSTAINABLE PATH FOR THE CITY

1. COMMITMENT

- The City is finding its sustainability path by working cooperatively with its citizens to build a common and shared **commitment**. The commitment is to ourselves that we will make the difference, in our lifetime, to ensure that sufficient *resource capacity* remains for generations to come, in our City and on our earth.

2. HEALTH

- There is only one path. If the path is to be healthy, it is up to us, the people making decisions each minute of each day about how, and how much, we use of the earth's resources to meet our needs. The long-term health of citizens relies on the health of the environment.
- Our focus must be on **health**; recognizing the integral relationships between the health of the environment, the ecology, and the economy and the health of our citizens.

3. LEARNING AND INFORMING

- Our attention is on **learning**. Educating ourselves to make the needed changes and **informing** others about how to make the difference.

4. RESOURCE MANAGEMENT

- One of the City's most important jobs is **resource management**; looking after the natural resources and infrastructure. Up until recently, decisions about infrastructure reflected largely on growth and were focusing on economic development. Little consideration was given to long-term impact on natural resources, their supply and use. We need a better balance: economic decisions within an environment context.

5. ECONOMIC AND EFFICIENT PROVISION

- In moving to the sustainability path, the City's responsibilities for the **economic and efficient provision of facilities and services** do not change.
- Our first major change is to consider total resource costs and benefits in all projects and developments within the City.

Existing Governance Framework

- The differences we want to make must be **within the existing governance framework and changes must have a positive benefit-cost result**.

Resource Use

- Land, Air, Water statement regarding **resource conservation, reduced use, efficient use**, regional impacts, **multiple use, adaptation**

Buildings and Transportation

- Buildings and Transportation statement regarding impact, planning, improving what exists with **densification**, using what we have, **alternative** fuels and energy supply, waste as a resource

PRINCIPLES OF SUSTAINABILITY FOR CITY OF KELOWNA

- **Continuous improvement**
Accomplishing today the same as yesterday, in a manner that can make resources available for other needs.
- **Efficiency**
Working to do things every day in a manner that reduces waste and increases value.
- **Economic**
Spending must yield benefits greater than the alternatives.
- **Local**
Kelowna will pay for improvements from the local long-term benefits they provide.
- **Incremental**
Individual investments and actions will focus on improving and sustaining the natural carrying capacity of the Okanagan Region.

ACCOMPLISHMENTS AND CURRENT ACTIVITIES

1998 – Regional Transportation Demand Management (TDM) Business Plan

TDM Achievements:

- ☐ Bicycle Network Master Plan
- ☐ Sidewalk Network Master Plan
- ☐ Bike racks installed on transit fleet
- ☐ Bike moorage facilities encouraged
- ☐ Hybrid vehicles for transit service coming this year
- ☐ Carpooling administration
- ☐ Smart Transit program
- ☐ Integration with Official Community Plan's compact urban development

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 completing emissions inventory with privately owned facilities;

2004 - the City's Environment Office is establishing a community outreach plan under the PCP program; and

2004/05 – CAEE Sustainable Building Pilot Project with development industry.

BACKGROUND

- The building industry is the nation's largest manufacturing activity, representing more than 50 percent of the nation's wealth and 13 percent of the Gross Domestic Product. In addition, buildings account for one-sixth of the world's freshwater withdrawals, one-quarter of its wood harvest, and two-fifths of its material and energy flows. Structures also impact areas beyond their immediate location, affecting watersheds, air quality, and transportation patterns of communities. Given that buildings consume a significant amount of resources during their construction and occupancy, Kelowna has a vested interest in ensuring that buildings are designed and constructed in an environmentally responsible manner.
- "Sustainability" describes the ability to meet the City's present needs without compromising the ability of future generations to meet their needs. "Sustainable building" (also referred to as "resource-efficient" or "green building") is the notion of designing, constructing, and operating buildings and landscapes in a manner that minimizes environmental impacts.
- In August 2002, the Energy Management Committee (EMC) developed a Proposed Sustainable Building Action Plan for the City of Kelowna. The City has worked on resource use efficiency with others, such as Water Smart and our PowerSense Partner, FortisBC. This work continues today and we are also working with Natural Resources Canada and the provincial Ministry of Energy and Mines to move our Sustainable Building Action plan ahead.
- Barriers to making sustainable the standard building practice continue to exist despite the City of Kelowna's successful programs, and despite the recent trend to provide more integrated conservation programs to the building industry. This is true for all sectors of building developers, including municipalities, other governments, and the private sector.

Barriers Previously Identified

- Communicating the benefits of sustainable building to the industry. Information currently available has not been successfully integrated into how development happens in cities and regions. There is a lack of information about the inherent long-term economic benefits of sustainable building.
- There are few if any benchmark standards or minimum performance standards for certain sustainable building issues. Initially, these may need to be identified on a project-by-project basis.
- Utility rates in Kelowna are low and can be a disincentive to any sustainable building practices that raise first costs.
- The reality is that first cost is the overriding concern amongst financial institutions, investors, and developers.
- There is a lack of integration among various incentive programs (rebates, loans, technical assistance, and recognition programs), and a lack of understanding about how to apply for and receive incentives.
- There is a perceived and real inconsistency between sustainable building practices and codes and regulations.
- It is unclear from the various codes and regulations whether sustainable building is a priority for the City

WHAT WE HEARD MARCH 3RD, 2005 (WORKSHOP)

1. Send a message now:

- Policy statement: Green statement and sustainable plan → new policy
- Showcase designs, technologies, and practices: Environmental Expo
- Coordination: continue to work with the development industry through the Sustainable Building Pilot Project
- Important for the City to show leadership with their own buildings following sustainable policies
- What the City does will help to create community awareness and support

2. Sustainable Development:

- Results must satisfy need for economic profits and meet social needs in a manner consistent with community values.
- A healthy house is a healthy family

3. How To Move Towards Sustainable Building:

- Life Cycle Costing can drive the economics for sustainable buildings.
- City of Kelowna has opportunity to make a business case using lifecycle costing rather than first costs in determining net benefits of development by bringing forward the variable costs through a net present value calculation.
- Impact of resource costs, such as water use, waste management, density and parking, can be taken into account as part of lifecycle costing calculation.

4. City Can Do:

- Densification can be encouraged through transportation planning.
- Keep the approval process timely and consider disincentives for poor design.
- Find out what others are doing.
- Consider establishing a sustainability policy development advisory committee with technical expertise.
- Build strong regional and institutional connections to efficiently maximize the benefits of the City's efforts.
 - For example, design/build criteria for governments need to be updated. Once the City has successfully tackled the changes and amendments required, the results could be shared with the regional district and other municipalities too.
- Consider providing incentives in partnership with other governments.

5. Design Professionals can do:

- Along with developers, educate the City and Governments about what is needed.
- Drive it for the Community.
- Leed is a tool and can be used as a guideline.
- Own the sustainable planning process, creating a sense of responsibility on their part.
- Through experience, costs have been reduced already.
- Consumers are savvy, for example, securing longer amortization periods for mortgages on concrete homes.

6. Challenges:

For Kelowna:

- The local development industry is made up of small firms. The consensus in the industry is that not only large firms can implement sustainability practices and develop sustainable projects. That message has to be communicated to all.
- There is an increase in construction of new summer homes.

For Sustainable Building:

- Developers face five-year payback tyranny.

- Getting the message out to other levels of government about updating design/build criteria.
- Consumer push is needed here to build the market for efficient buildings and support municipal changes in building development approvals. This is a challenge and an opportunity.
- Integration and coordination of DSM programs from government and utilities.
- Utility rates for water and electricity are too low.
- Commissioning of new buildings and homes is needed, along with building performance tracking and monitoring to ensure that installed systems are operated properly and that the benefits continue to be delivered throughout the life of the building.

The Mayor's 2005 Environmental Expo

Mayor's Actions Items:

1. *Provide Lean Green City Government*
2. *Promote Active Transportation*
3. *Encourage Environmental Practices*
4. *Create Healthy Urban Centres*

Lean & Green City Government

City government will lead by example with practices that save money and improve the health of people and the environment.

Kelowna's Strategy:

- Improve air quality and reduce greenhouse gas emissions by producing clean energy and using green vehicles
- Design and build City facilities that are economical and healthier for people and the environment
- Reduce City use of water , energy and other resources
- Switch to products that protect employee and community health and the environment
- Reduce city use of pesticides to a minimum in parks and on roads

Active Transportation

Kelowna will continue to take steps to improve by promoting transportation choices (transit, bicycles, walking) that make our city more liveable and preserve green space.

Kelowna's Strategy:

- Support Public Transit
- Make Kelowna the most bike and pedestrian friendly city in the Okanagan
- Promote clean fuels and clean vehicles
- Build more sidewalks to connect communities, enhance public safety and encourage more walking

Environmental Practices

We will encourage businesses, residents and others to use resources more efficiently and adopt environmentally responsible practices.

Kelowna's Strategy:

- 3R's: Reduce, Reuse, Recycle at home and at work
- Conserve the cities water and energy resources
- Foster environmental awareness by providing city programs and services that serve Kelowna's diverse populations

Healthy Urban Centres

We will improve Kelowna's quality of life, protect and restore the environment and enhance neighbourhood liveability

Kelowna's Strategy:

- Preserve and increase Kelowna's green spaces
- Enhance water quality of Okanagan Lake and urban creeks
- Improve air quality and look for local solutions to global warming
- Promote sustainable healthy urban development that reduces environment impacts on land, air and water