

Energy Conservation

CityPlan

Riley Park/South Cambie **RPSC**

Energy Policy Challenges

- In 1992, Canada signed an international agreement to reduce "greenhouse gases" - gases that contribute to global climate change. Energy production and use is a major source of greenhouse gases.
- The province of BC, like Canada, had a commitment to stabilize greenhouse gas emissions at 1990 levels by 2000.
- Decisions made at the community level about urban form, transportation, site plans and neighbourhood design have a profound effect on energy and energy-related air emissions.

How Do Communities Use Energy?

Most communities use energy mainly in:

- transportation, in moving goods and peoples within the City;
- buildings, for heating, cooling, equipment and appliances;
- infrastructure, for delivering goods and services such as water and waste water treatment;
- lighting, for buildings, parks and streets.

The Savings and Environmental Benefits

Clearly significant savings in energy could be achieved through:

- shifts to non-vehicular travel modes by land use controls and promotion of walking and cycling;
- more efficient building design and siting;
- more efficient lighting systems.

By reducing our energy use, we are not only saving money, we are minimizing a variety of harmful

environmental impacts attributable to our energy consumption. For example, burning fossil fuels such as oil and gas contributes to air quality problems ranging from smog to global warming; hydro-electric dams flood large tracts of land and can be harmful to downstream fisheries.

Grade and Trend

Energy Utilization received a POOR-FAIR rating in the 1995 State of the Environment Report Card. Our very high per capita energy consumption can be reduced through public education, power efficient products, expanding the City's Energy Utilization By-law and programmes such as Power Smart and Air Care. Additional reductions can be achieved through improved public transit, car pooling, alternate fuel sources and new technological advances.

City Initiatives to Reduce Energy Use

The City has adopted several **policies** aimed at reducing energy use:

- **CityPlan** and the City's land use policies promote complete communities with jobs close to home thereby reducing fuel consumption for travelling to work;
- The **Transportation Plan** gives priority to pedestrians, transit and bicycles over the automobile;
- The **Greenways Plan** offers an attractive walking network linking various parts of the City;
- The **Bikeways Plan** provides an enhanced network of bicycle routes through the City;
- **Building Codes and by-laws** require buildings to be insulated to

reduce heat loss;

- By-laws, policies and regulations to promote the **protection, retention and planting of trees on public and private property**. Research has shown that the presence of trees in an urban environment can substantially reduce energy costs. Urban trees moderate temperatures in a number of ways: by circulating and evaporating ground water through its leaves; by providing shaded areas; and by providing a buffer against wind.

The City has adopted **practices aimed at reducing energy consumption**, for example:

- The City has converted over 24,000 incandescent and mercury vapour street lights to energy-efficient high pressure sodium lamps in conjunction with the BC Hydro Power Smart Program. The conversion saves \$600,000 of energy costs annually.
- Approximately 1/3 of the City's vehicle and equipment fleet of approximately 3,000 units fleet uses alternate fuels such as diesel and propane, and emission standards are continually monitored to ensure the best available emission controls. Also, the City fleet has been consistently down-sized since the early 1980's.

Sources

City of Vancouver:
Engineering Department
1995 State of the Environment Report

Douglas College
Institute of Urban Ecology
Green Links Project Overview