



The Role of Energy in Community Planning

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Local Governments and Energy

- Canadians are the 4th highest per capita energy users in the world
- ~ \$4,300/person/year on energy
- Municipalities directly account for 7% of GHG emissions, indirectly > 50%
- Rising energy costs and supply instability will have a major impact on local governments, local businesses and residents



Community Energy Planning

- Consideration of energy supply and demand in community design and development:
 - Land use
 - Transportation
 - Buildings
 - Infrastructure
 - Energy supply



Benefits of CEP



- Efficient communities
 - Reduced costs, efficient land use, reduced travel times
- Economic development
 - Energy \$ remain local, energy security, price stability
- Healthier communities
 - Air quality, livability
- Environmental benefits
 - GHG reductions, healthier ecosystems, air quality

Community Energy Planning



Planning



Policies



Action

Planning

- A Community Energy Plan can:
 - Clarify goals & priorities
 - Evaluate current energy consumption and forecasts
 - Encourage community engagement
 - Prioritize and coordinate potential opportunities





Planning (cont'd)

- A Community Energy Plan:
 - May be driven by a single issue or project, but should be comprehensive
 - May be integrated with an air quality or overall sustainability plan
 - Scale: Regional, Municipal, or Neighbourhood

Policies

Energy/GHG goals can be incorporated into OCP, bylaws, policies, etc.

- Purchasing policies
- Civic building policies
- District heating service areas
- Density bonusing
- Rezoning applications



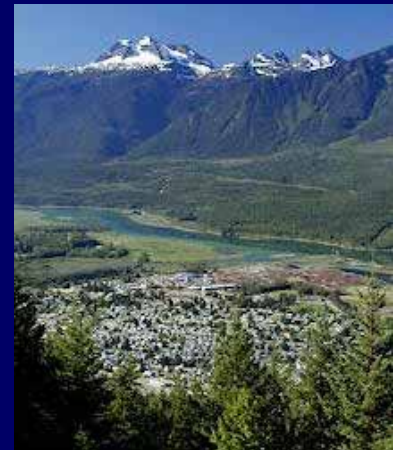
Actions

- Smart growth planning
- Transportation demand management
- Civic building retrofits
- Fleet vehicle conversions
- Education campaigns
- Renewable energy supply projects



Revelstoke District Heating

- First renewable-energy district heating system in BC, burning wood waste from local mill
- Hot water heating to downtown buildings, steam for kilns
 - Reduced use of silo burner
 - Lower energy costs for customers
 - City is a partner in Revelstoke Energy Corp.



Westhills Green Community

- 472 acre sustainable neighbourhood plan
- LEED Neighbourhood Development Standard; all buildings to be LEED certified
- Compact development; all amenities within walking distance
- Local commuter buses, extensive trail network



Saanich Municipal Energy Retrofit

- 10 municipal buildings
- Lighting, mechanical and water
- Energy performance contract – guaranteed savings
- \$90,000 in annual savings



Solar Energy in Dawson Creek

- Solar water heating in three municipal buildings
- Partnership with BCSEA for promotion and education about solar water heating
 - Solar water heating curriculum introduced at Northern Lights College
 - Developing a model bylaw to require “solar ready” new homes



Bowen Island – Rezoning Policy

- Energy performance standards via rezoning
 - Rezoning applicants are expected to achieve Built Green™ “Gold”, and EnerGuide for New Houses 80 for new residential development
 - Extensive developer consultation and committee referrals



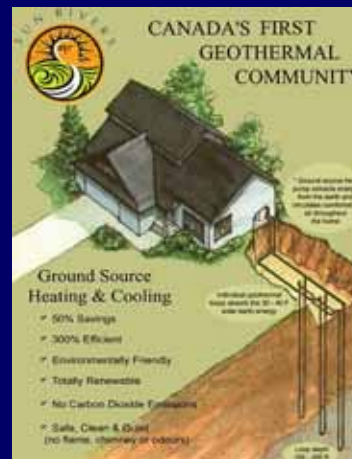
Wastewater Heat Reclaim, Kelowna

- Wastewater treatment plant discharge used as low temperature heat source
- Heat recovered using heat pumps
- Used as first stage of heating for Okanagan College



Sun Rivers Geothermal Community

- 2000 home development in Kamloops
- Each home has a closed ground loop
- Ground loops installed and paid for by Corix Utilities, leased back to homeowner
- Homeowner responsible for systems within the house



Biodiesel Demonstration Program: BC Biofleet - Fleet Challenge BC



- 6 municipalities in Lower Mainland and Whistler
- Will purchase 80 million litres of biodiesel over 5 years
- Biodiesel cost can be same or less than regular diesel



West Vancouver Micro-Hydro

- Hydro-electric generation from municipal water supply
- Partnership with Pacific Cascade Hydro
- 1.2 GWh annual generation
 - \$328,000 capital investment by municipality, 5-year payback



Community Energy Association

Helping Communities Benefit From Energy Opportunities

Partners



Community Energy Association

Helping Communities Benefit From Energy Opportunities

- Energy planning support for BC local governments:
 - Presentations to council or staff
 - Energy planning toolkit
 - Funding guide
 - Website – local government energy information
 - Energy Aware Award
 - Green Buildings BC for Local Governments



Thank you

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