One Coast One Climate

Sunshine Coast Community Energy & Emissions Plan (CEEP)
One Coast One Climate Launch Workshops

April 14, 2011  8:30am to 2:30pm

Gibsons and Areas Community Centre
760 Park Road, Gibson, BC

Exploring Opportunities in Green Building,
Land-Use & Design on the Sunshine Coast

AGENDA

8:30-9:00am Registration - Coffee & muffins (courtesy Wheatberries Café)
9:00am Welcome and Overview of CEEP work
9:30am Claire Beckstead, Pembina Institute
   Green Building Leaders: Designing a Renewable Energy Requirement for B.C.
11:00am Lunch – Catered (courtesy Truffles Café)
11:45am Peter Ostergaard – Fraser Basin Council
   Community Energy Planning: Polices and Tools
12:00pm Johan Stroman – SCRD  Key CEEP Initiatives
12:20pm Cheeying-Ho, Whistler Centre for Sustainability
   Energy Efficient Land Use Practices – Supporting the SCRD’s CEEP
1:50pm Break – Treats (courtesy Truffles Café)
2:00pm-2:20pm A spectrum of views Activity - Raffle prizes

Special thank you to Wheatberries and Truffles Café in Gibsons for catering this event
Brought to you by your local government: Town of Gibsons, District of Sechelt, shíshálh Nation and the SCRD
Sunshine Coast Community Energy and Emissions Plan

• What it is?
  – A local plan that helps guide our reduction of energy use and emissions

• Why developed?
  – Committed to create a plan as signatory of the 2008 BC Provincial Government’s Climate Action Charter
Climate Action Charter

- 179 of 188 signed
- Commit to measure and reporting on community GHG profile and work to make community more compact and more energy efficient via OCP’s.
Bill-27 Government Institutions
Carbon Neutral by 2012 – in 3 ways

- Reduce Emissions
- Develop Offset projects
- Purchase Offsets
Municipal operations?

- Local government committed to be carbon neutral by 2012
- CEEP speaks to all other community emissions generated
A forward-thinking framework –
A compass - to guide our Sunshine Coast
efforts toward a more sustainable future.
An invitation to every organization,
household, and individual to endorse and
adopt a course of action, to embark on a
journey, based on a set of common
principles — a tall order, some would say,
but one which many of us are already
committed to taking.

How could we be relatively sure that we
were all on the same journey?

It’s development is a collaborative effort of Sunshine Coast Community Services,
School District 46, The District of Sechelt, Community Futures, the Town of
Gibsons, The Sunshine Coast Community Foundation and the Sunshine Coast
Regional District.
BC Municipality Success Stories

- **The District of North Vancouver** - multifaceted and comprehensive approach to tackling climate change through long term planning.

- **Hartland Landfill Gas Utilization Project** - A public-private partnership between the CRD and Maxim Power Corp has succeeded in harnessing methane produced at the Hartland Landfill and transporting it to a generation facility to produce enough power for 1600 homes.
BC Municipality Success Stories

• Ucluelet has used zoning tools, alternative development standards and density to cultivate sustainable community growth.

• The District of Houston promotes alternative energy sources - geothermal, solar and biomass energy.

• The T’Sou-ke First Nation community have become the largest solar powered community energy project in BC
CEEP

• When?
  – Between 2009-2010

• How was it developed?
  – Public engagement process, 330+ public, 16 different events, 13+ community groups and local institutions consulted
CEEP

• Project Objectives - What does it say?
  – Bill-27 Set GHG reduction targets and measures to be incorporated into OCPs
  – Comply with FCM PCP & BC Climate Action Charter
  – Create local economic development opportunities for renewable energy supply
  – Move away from fossil fuel dependency
  – Set aggressive targets for reducing energy and emissions
CEEP

2007 emission levels = 355,000 tonnes/year

Light green target = 19% below BAU
332,000 tonnes/year

Deep green target = 42% below BAU
237,000 tonnes/year

BAU = Business as usual; emissions = Greenhouse Gases (GHGs)
CEEP

Sunshine Coast GHG Baseline values

- Transportation: 35%
- Industry: 32%
- Agriculture/Land Conversion: 15%
- Solid Waste: 7%
- Residential: 8%
- Commercial: 3%
What’s the problem?
ETOM
Climate Change

Atmospheric Carbon Dioxide

- Vostok Ice Core
- Law Dome Ice Core
- Mauna Loa Instrumental Measurements

Current Level
Painting a complete picture...

The complete picture of the carbon cycle

Fossil Fuel Burning

Vegetation & Land

Ocean

Carbon cycle for the 1990s. Numbers are in billion tonnes of CO2 (IPCC AR4).
Painting a picture of sorts...

An incomplete picture of the carbon cycle

Fossil Fuel Burning

Vegetation & Land

Ocean

23

444

332

Carbon cycle for the 1990s. Numbers are in billion tonnes of CO2 (IPCC AR4).
Global Warming
Natural vs. Human caused

(°C)

Observations
Natural
Anthropogenic + Natural

1900 1920 1940 1960 1980 2000
“Warming of the climate system is unequivocal,…Most of the …warming… is very likely [> 90% probability] due to [human] GHG increases”

Fourth Scientific Assessment Report, 2008

“Climate change is occurring, is largely caused by human activities, and poses significant risks … for a broad range of human and natural systems.”

http://www.ipcc.ch/
Climate Change

97 out of 100 climate experts think humans are changing global temperature

Doran et al 2009, Anderegg et al 2010
We must achieve 80% reductions by 2050 to keep change below 2°C.

Isaac Stern, Chief Economist, World Bank
Climate change models
Likely effects of four emission reduction models

132% increase in emissions by 2050*
5.5-7.1°C rise in global temperature by 2100**

Business as usual
No action taken

Late and slow decline
Action starts in 2030

76% increase in emissions by 2050
4-5.2°C rise in global temperature by 2100
Global Paths

Early but slow decline
Action starts in 2010
Emissions return to 1990 levels by 2050

Early and rapid decline
Action starts in 2010
47% decrease in emissions

2.9-3.8°C rise in global temperature by 2100
2.1-2.8°C rise in global temperature by 2100

*from 1990 levels
**Temperature rise is relative to pre-industrial levels and ranges from the most likely (50% chance of occurring) to the worst case (10% chance of occurring)

SOURCE: MET OFFICE
Prioritizing Emission Reductions

1. Reduce Demand
2. Re-use Waste Heat
3. Renewable Heat
4. Renewable Electricity
Net Zero Homes

Or Near Net Zero Homes

[Bar chart showing energy consumption per square meter for different categories, with a focus on space heating.]