

British Columbia's Approach to Climate Change



Alaska Forum on the Environment 2006

BC's Climate Change Approach



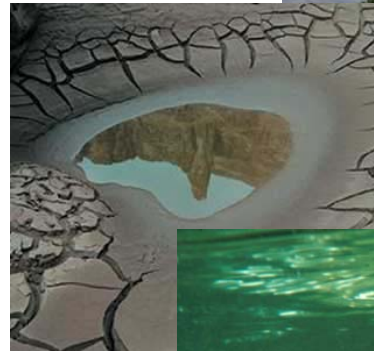
- Focuses on both adaptation and GHG emission reductions
- Engages with the federal government, and other jurisdictions
- Uses various policy frames and labels

Impacts of Climate Change (1)

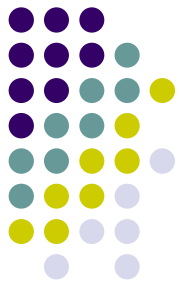


Drought and heat
(2003)

- 84 municipal water systems stressed
- \$200 million damage from interface fires
- reduced Fraser River sockeye run



Impacts of Climate Change (2)



Heavy rainfall events (2003, 2004, 2005)

- Landslides & floods
- Clean up costs
- Loss of life

Warm winters

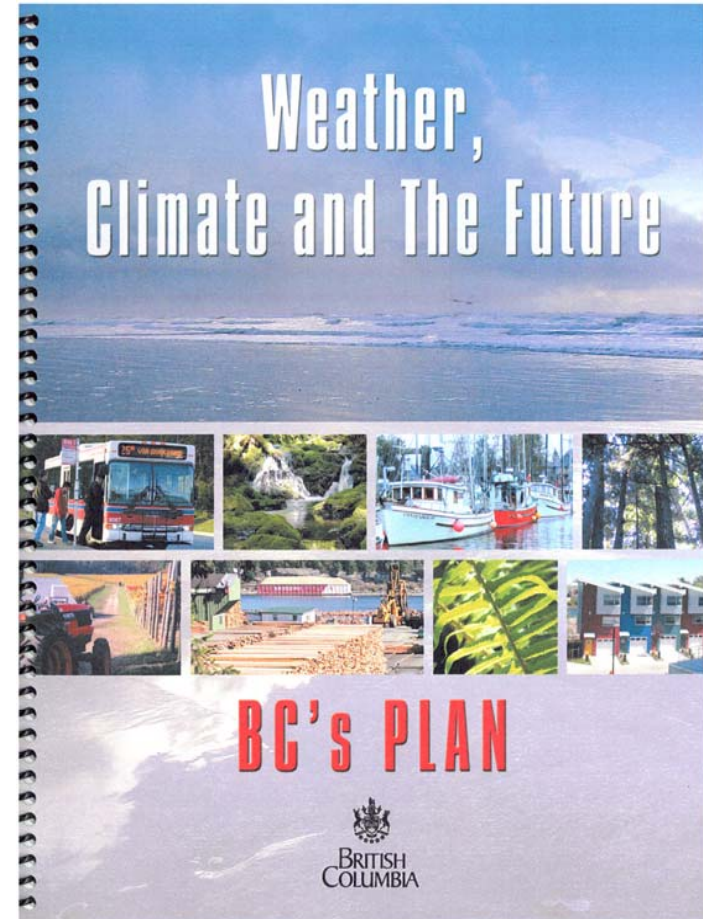
- Timber and other losses related to the mountain pine beetle infestation



British Columbia Plan



“It is prudent for B.C....to take both actions that reduce provincial greenhouse gas emissions and actions that enable the province to adapt to anticipated climate change impacts.”



Government Decision-making



- **Ministry of Environment**
 - Water management
 - Biodiversity management
 - Structured decision-making initiative
 - Regional projects
 - Internal workshops
- **Ministry of Forests**
 - Adaptation strategy
 - Research program
 - Fire management plan
 - Mountain pine beetle action plan

Monitoring: Network Review



- Based on international standards for climate and hydrologic station density
- Networks inadequate for water management, downscaling and impact assessment

BRITISH COLUMBIA'S CLIMATE-RELATED OBSERVATION NETWORKS: AN ADEQUACY REVIEW



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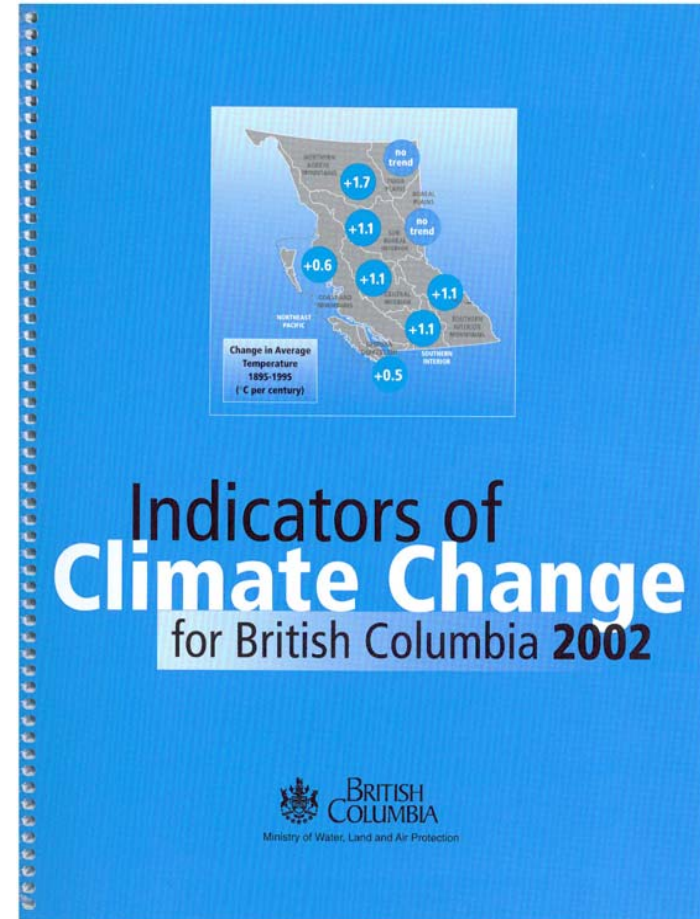
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SEPTEMBER, 2003

Reporting: Historical Trends



- Report on climate and related bio-physical trends (2002)
- Identify other trends
 - Groundwater levels
 - Bird migration dates
- Identify other data sets
 - Soil moisture
 - Ice free dates



Tools: Regional Climate Model



- Support development of Canadian Regional Climate Model (CRCM)

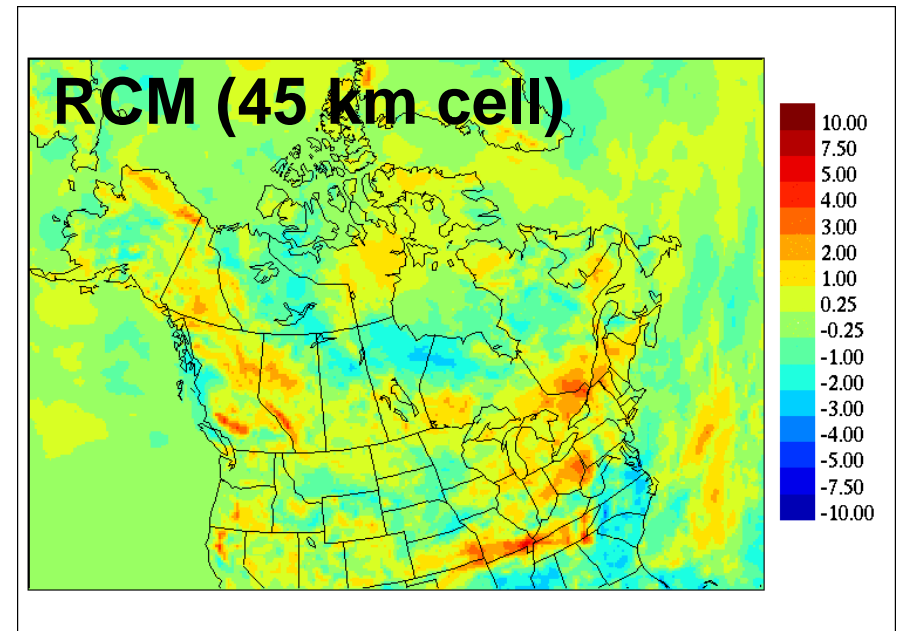
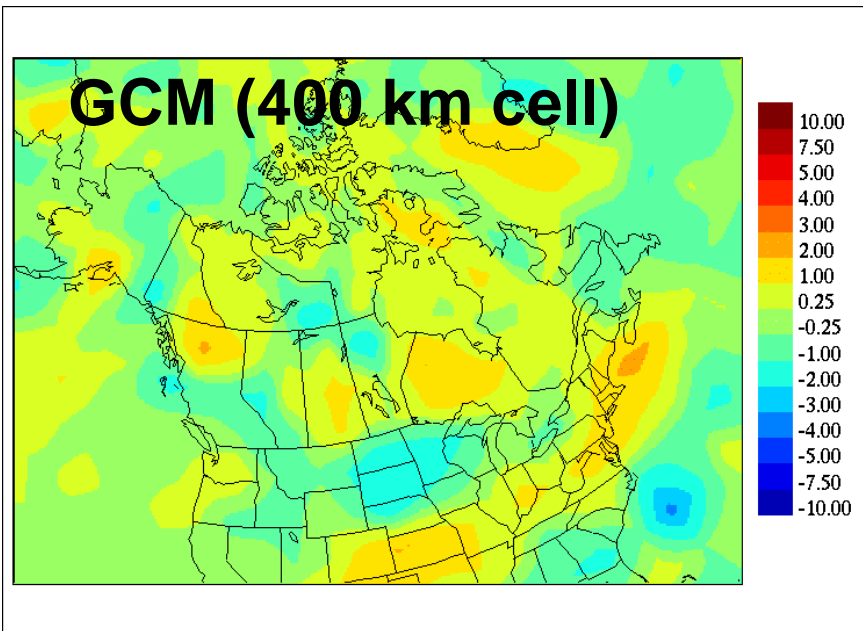


Figure: July precipitation (5-year average): change from 1970-1974 to 2039-2043

Tools: Sectoral and Regional



- **Water Balance Model**
 - Results of management practices
 - Includes future precipitation
- **Coastal Storm Surge Model**
 - Partner: Institute for Ocean Sciences
 - Deliver sea level forecasts and coastal planning tool for BC

Applied Research



Ministry of Environment

- Water
- Biodiversity
- Municipal capacity

Ministry of Forests

- ClimateBC software
- Impacts on lodgepole pine forests
- Tree breeding & reforestation
- Forest growth & yield

Building Capacity: Pacific Climate Impacts Consortium (PCIC)



- *New organization.* Build on existing expertise but shift from national to regional focus
- Government, university, business partnership
- Facilitate stakeholder-driven applied research
- Assemble multidisciplinary research teams
- Write funding requests
- Provide regional (BC & WA) climate impact information
- Support researchers and stakeholders in using regional data



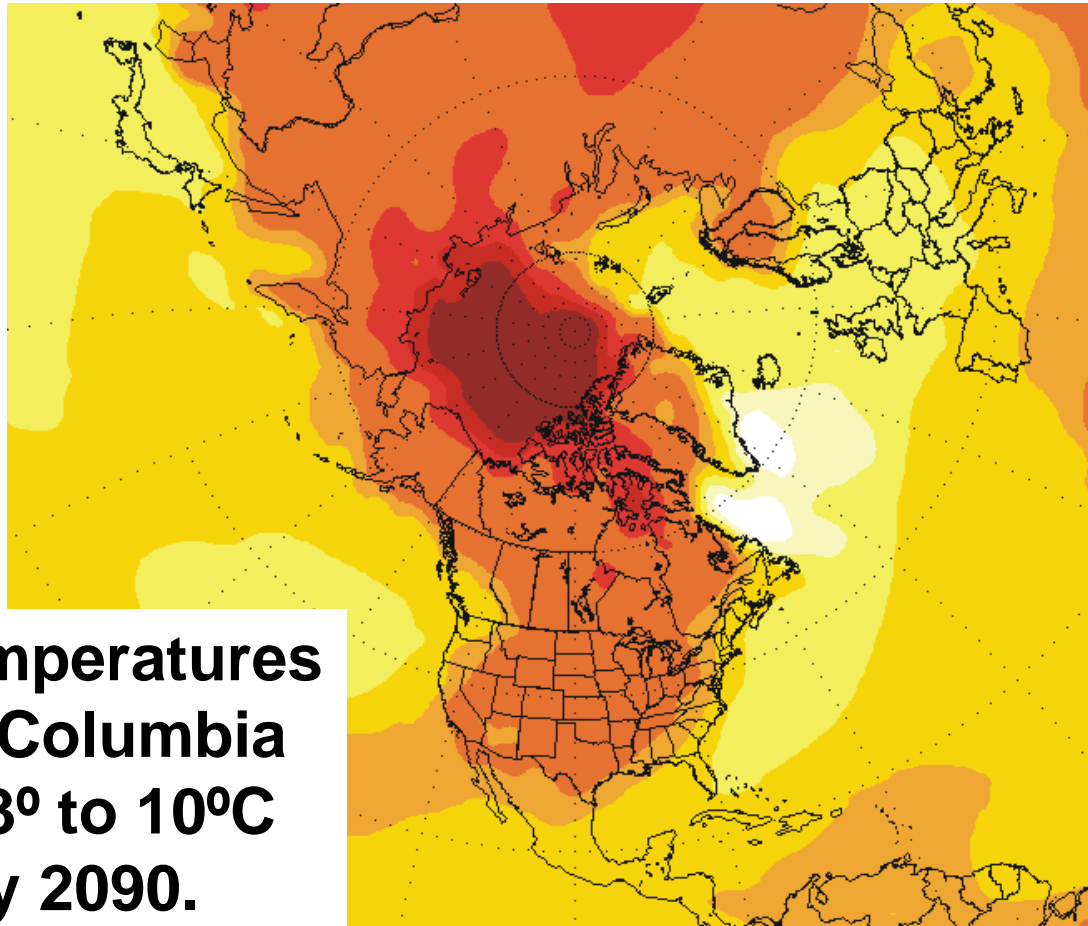
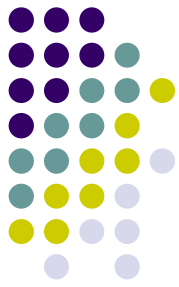
Building Capacity: Outreach

- Conferences & proceedings
 - Species at risk
 - Ecological restoration
 - Southern BC forests
 - Responsible investment
 - BC municipalities
 - Fisheries and communities
- Royal BC Museum exhibit

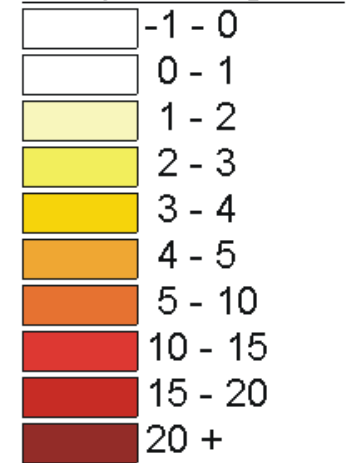


Building Capacity: Climate Scenarios

Maps-climate-dir.exe



Temp. Change °C



km 250 0 2500 km

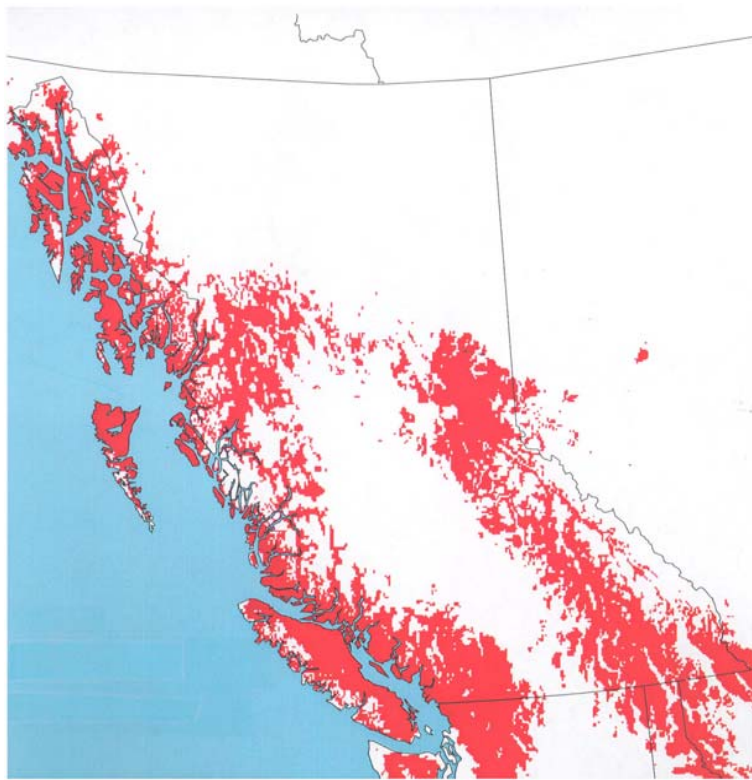
Winter temperatures in British Columbia could be 3° to 10°C warmer by 2090.

Source: Meteorological Service of Canada, Climate Research Branch

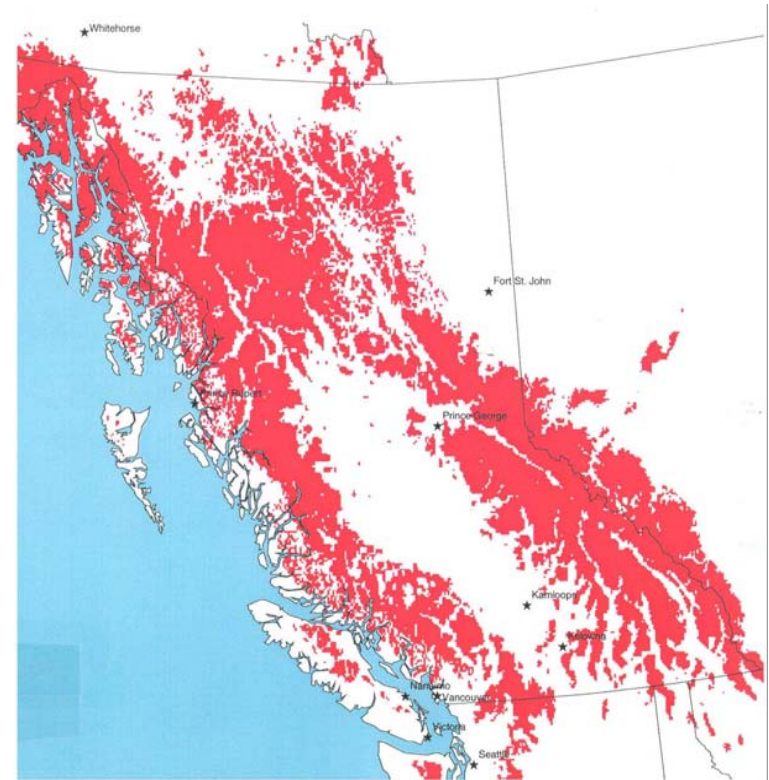
Building Capacity: Ecosystem Scenarios



[Maps-species-dir.exe](#)



**Climate suitable for
western red cedar 2000**



**Climate suitable for
western red cedar 2080**

Source: R. Hebda, Royal BC Museum

Engagement with Federal Government



- Federal government key driver on GHG emissions reductions:
 - National target
 - National regulation on large industry
 - National target for vehicle manufactures
 - Incentive programs
 - Project funding
- BC climate plan basis for engagement

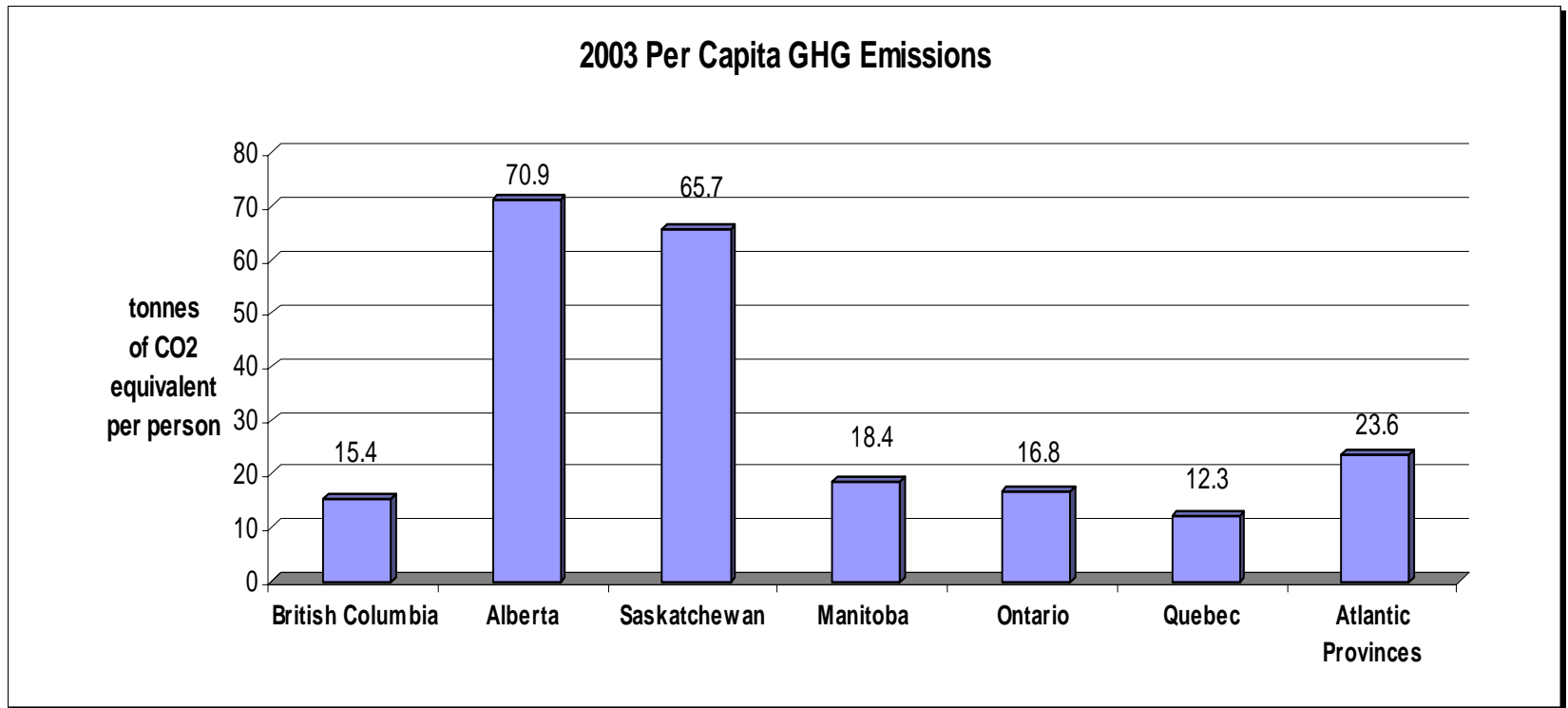
BC GHG Emissions Target

Engagement with Provinces

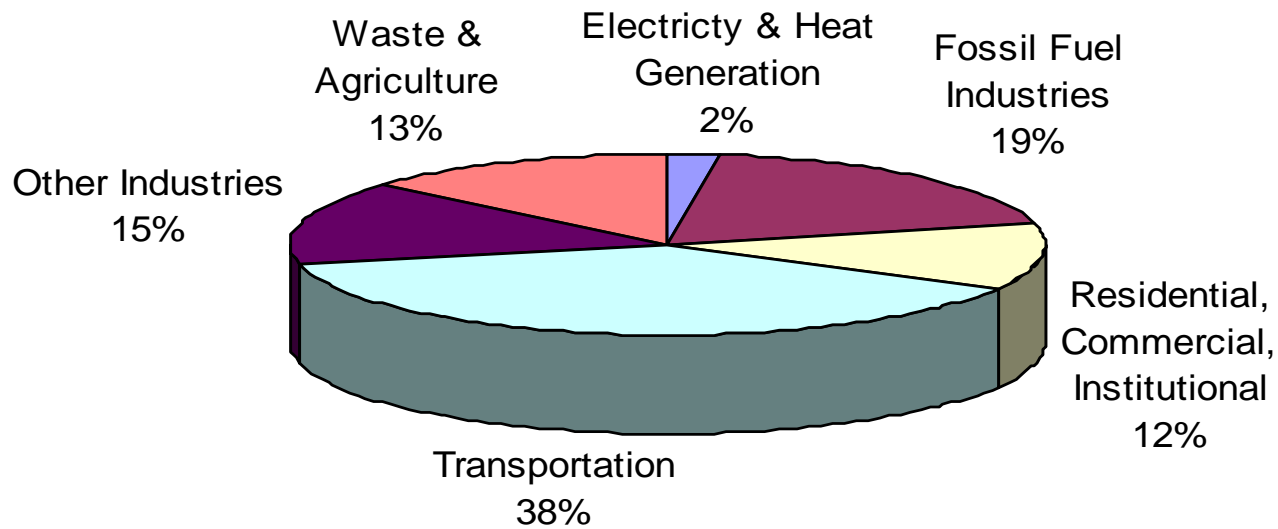


- Improve or maintain current 3rd best per capita GHG emissions relative to other provinces
 - No need to disentangle effects of federal & provincial actions
 - Uncertainty about future national commitments neutralized
 - Uncertainty about technological progress neutralized
 - Scales out effects of population growth
- Relative provincial effort & success within overall Canadian context is important
- Relative target is giving absolute grounding by Canada's Kyoto Protocol target

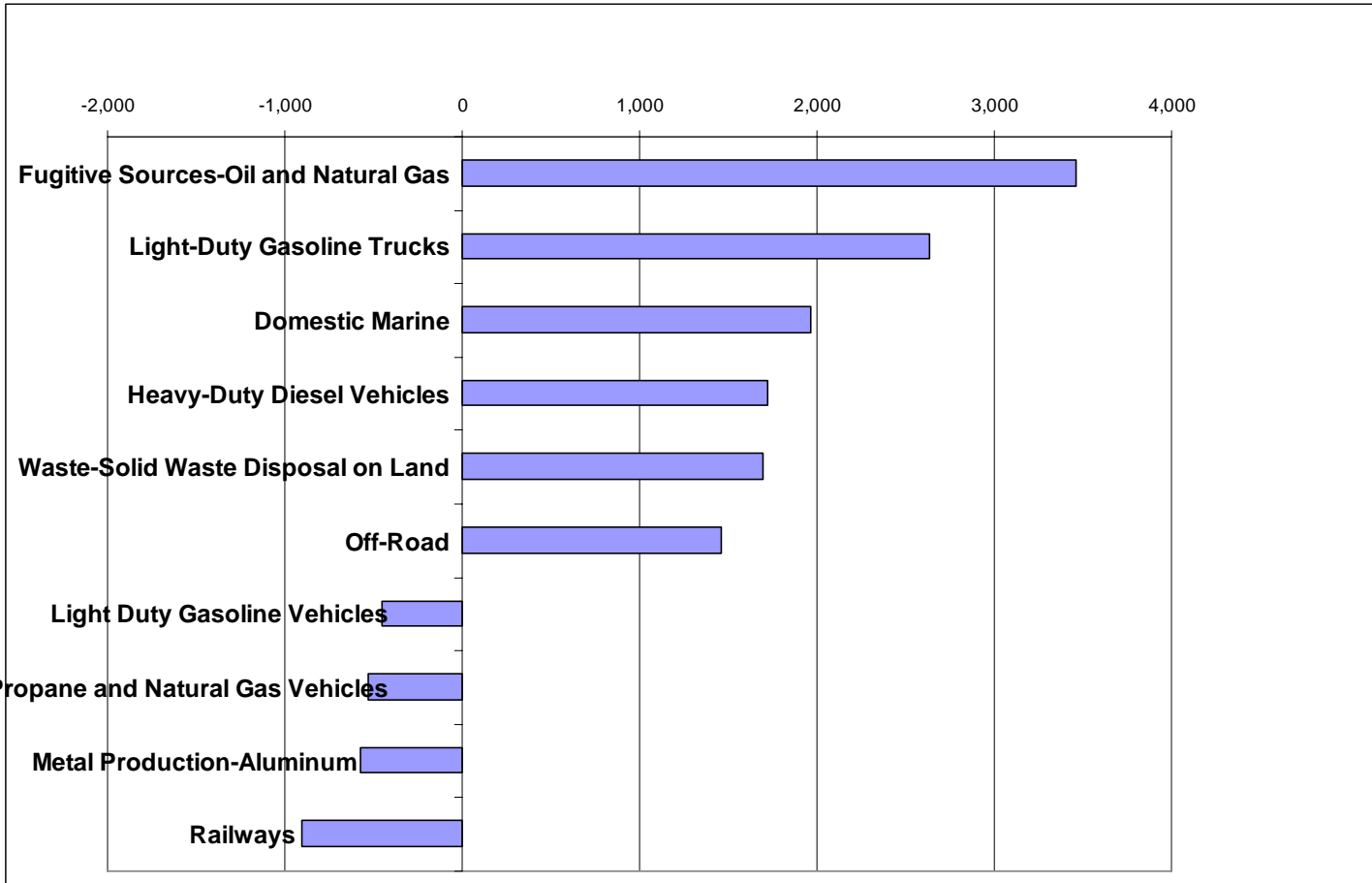
2003 Provincial GHG Comparison



2003 BC GHG Emissions by Sector



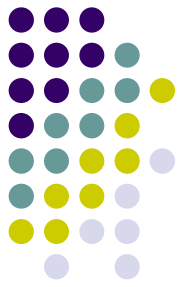
BC's Emission Changes 1990-2003 (selected sectors)



GHG Mitigation: Selected Initiatives

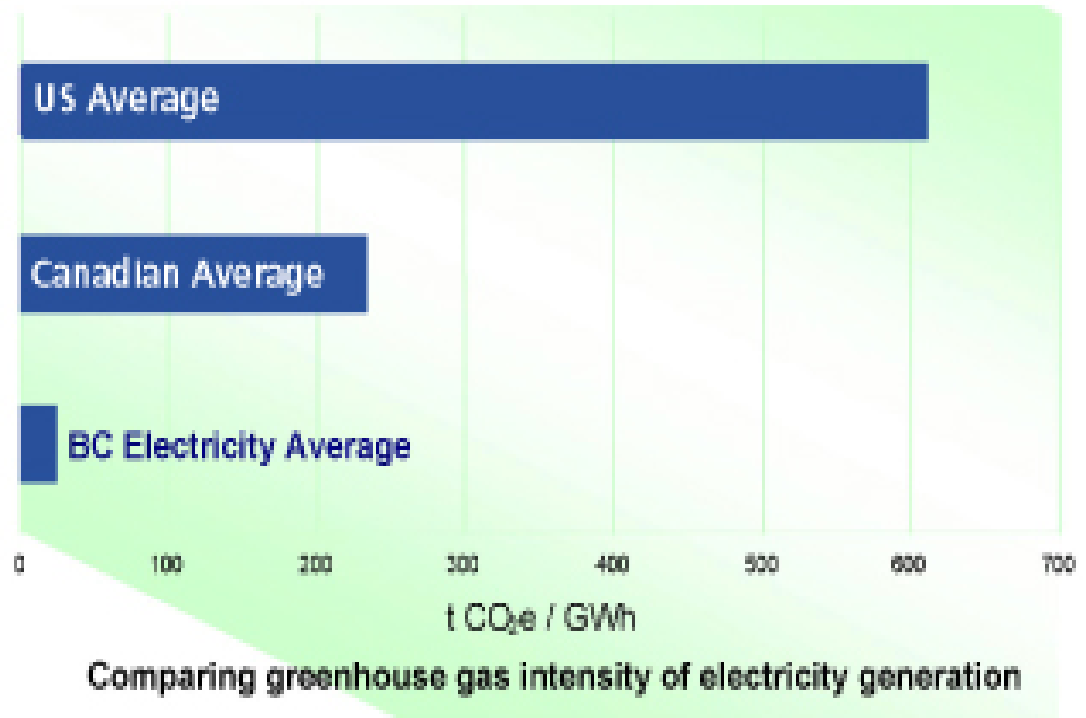


- BC Hydro
- Energy Efficiency for Buildings
- Vehicle and fuel tax incentives
- Community and social initiatives



BC Hydro

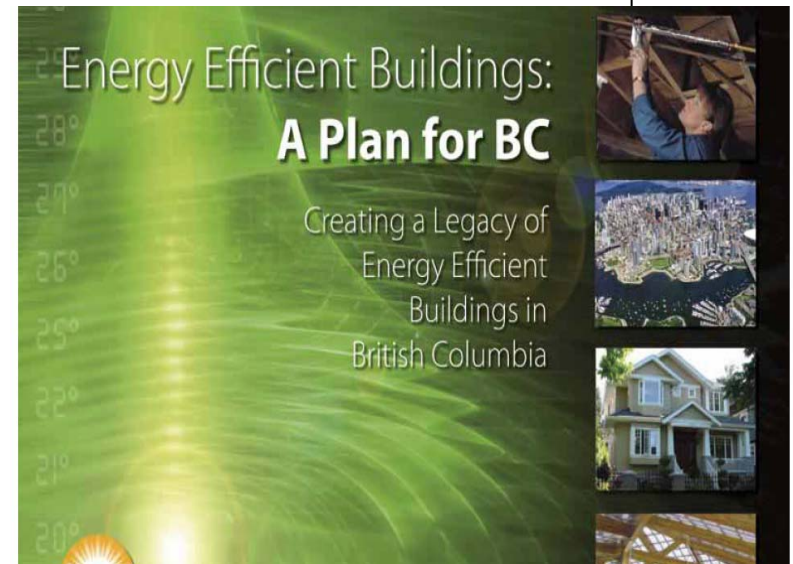
- 1/3 new resources from DSM
- 50% Clean Electricity
- Net metering
- Stepped rates for industry
- Green Power Certificates



Energy Efficient Buildings: A Plan for BC



- Residential targets:
 - New - EnerGuide 80
 - Existing -17% less energy for 12% of stock
- Commercial targets:
 - New – 20% less energy
 - Existing – 14% less energy
 - for 20% of stock



- Achieving target results in 2.3M tonne reduction GHG by 2020:
- 11% of residential and commercial electricity consumption
 - 14% natural gas consumption (2001)

Alternative Fuel Vehicles and Motor Fuel Tax Concessions



- Vehicles: alt-fuel capable, hybrids
 - \$7000 price reduction for surtax rates
 - 30% provincial sales tax reduction up to \$2000 for cars, up to \$10,000 for buses
- Ethanol, biodiesel exemption from Motor Fuel Tax
- Propane reduced rate
- Other fuels by application

Community and Social Initiatives



- Integration of air quality related planning
- New Deal for Cities
- ActNow BC
- Smart Growth on the Ground
- Alternative Energy and Power Task Force
- 2006 World Urban Habitat Forum
- 2010 Winter Olympics

Contact

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