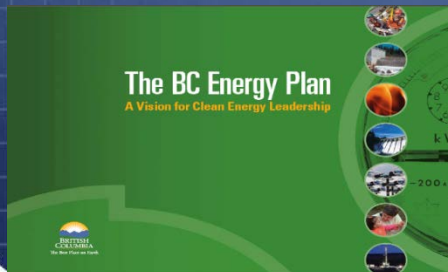




# Ministry of Energy, Mines and Petroleum Resources

## Joint Public Advisory Committee Commission for Environmental Cooperation

March 24, 2010  
Paul Wieringa  
Executive Director



## *Shared Commitment on Climate Action and Clean Energy*

- **Western Climate Initiative**
- **International Carbon Action Partnership**
- **2009 Governors' Climate Summit Declaration**
- **2007 MOU on protecting "our shared climate and ocean"**
- **The Climate Registry**
- **Pacific Coast Collaborative**

## *Policy Actions*

- Climate Action Plan – 33% reduction by 2020; 80% by 2050:
  - Revenue neutral carbon tax, Western Climate Initiative (WCI), carbon neutral government, renewable fuel requirement, low carbon fuel requirement, green building code, efficiency standards
- BC Energy Plan – Market Drivers:
  - 90% electricity from clean energy, offset natural gas, CCS for coal, energy self sufficiency by 2016, 50% of new incremental supply from energy efficiency and conservation



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## *Carbon Tax*

	July 2008	July 2009	July 2010	July 2011	July 2012
<b>Gasoline</b> Cents/litre	2.41	3.62	4.82	6.03	7.24
<b>Diesel</b> Cents/litre	2.76	4.14	5.52	6.89	8.27
<b>Natural Gas</b> \$/GJ	0.499	0.748	0.998	1.247	1.496
<b>Coal</b> \$/tonne	20.79	31.18	41.58	51.97	62.36

# *Electricity In BC – Overview*

- **Capacity: 15 GW**
- **Energy: 65 TWh**
- **British Columbia generated 93% of its electricity in 2008 from hydro and biomass/biogas.**
  - 89% hydroelectric
  - 4% biomass
  - 6% natural gas
- **No coal-fired generation in British Columbia.**
- **In 2009, the first wind plant came online.**



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# *Electricity In BC – Policy*

- **Low Electricity Rates**
- **New projects will have net zero GHG emissions**
- **Zero net GHG emissions from existing thermal generation by 2016.**
- **Clean or renewable electricity generation continues to account for at least 90% of total generation.**
- **Replace the firm energy supply from the Burrard Thermal plant with other resources.**
- **Ensure electricity self-sufficiency by 2016**
- **Smart Metering 2012**
- **BC Vision to develop as a clean energy powerhouse**

# *Strong Commitment to Conservation and Efficiency in Energy Plan*

- **50 per cent of BC Hydro's incremental resource needs met by conservation by 2020.**
- **Utilities to pursue cost-effective, competitive demand side management**
- **Energy performance labelling**
- **Develop an Industrial Energy Efficiency Program**
- **Energy Efficiency Regulations**
- **Demand-side Measures Regulation**
- **New rate structures to encourage conservation**
- **Green Building Code**
- **New government buildings LEED Gold**

## *Stringent Environmental Standards*

- **Environmental Assessment Process**
- **Water License**
- **Up to 50 permits from 14 regulatory bodies**
  - **Federal, provincial, local, First Nations**
  - **No net loss of fish habitat**
  - **Land use and recreational uses**
  - **Standards for drinking water**





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## *RPS requirements.*

- **RPS requirements tend to focus on wind, solar, geothermal and biomass sources, rather than hydroelectricity.**
- **British Columbia generated over 58,000 GWh from hydroelectric sources in 2008.**
- **About 800 GWh are from sources producing 30 MW or less – the threshold in California's current renewable portfolio standard.**
- **California's RPS also precludes any diversions or changes in stream flow timing or volume for new capacity in new projects.**
- **No proponent has bid into a BC Hydro call with a project that would qualify under this restriction.**



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## *Mutual Objectives*

- **Reduce greenhouse gas emissions**
- **Generate clean and renewable electricity**
- **Hydroelectricity can help**
  - **Shaping/Firming**
  - **Zero-carbon generation**
  - **As renewable as wind or solar**