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Mitigation Potential Workshop

Canada

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- Three potentially useful indicators
 - Marginal cost of abatement
 - Indicator of costs for firms and individuals
 - Cost of emission reductions as percent of GDP
 - Indicator of economy-wide abatement costs
 - Percentage welfare loss
 - Indicator of economy-wide welfare costs



- Canada's National Round Table on the Environment and the Economy* has estimated that:
 - reducing domestic emissions by 20% below 2005 levels by 2020 would require an economy-wide emission price of about C\$75 (2003) per tonne CO_{2e}
 - reducing domestic emissions by 65% below 2005 levels by 2050 would require an economy wide emission price that increases to over C\$240 per tonne CO_{2e}

*Source: *Getting to 2050: Canada's Transition to a Low-emission Future* (January 2008)

Five factors drive GHG emissions in all countries*



- **Population**
 - From 1990 to 2005, Canada's population grew 16.7%
- **GDP per capita**
 - From 1990 to 2005, Canada's GDP grew 50% and Canada's GDP per capita grew 28.6%
- **Energy consumption per unit of GDP**
 - From 1990 to 2005, Canada's energy consumption per unit of GDP decreased 14%
- **Ratio of fossil fuel consumed to total energy consumed**
 - From 1990 to 2005, Canada's ratio of fossil fuels consumed to total energy consumed was about 74%
- **CO₂ emissions per unit of fossil fuel consumed**
 - From 1990 to 2005, Canada's CO₂ emissions per unit of total fossil fuel consumed declined about 1.4%

*Source: World Bank: *Growth and CO₂ Emissions: How do different countries fare?* (2007)



- **Export of fossil fuels**
 - 10% of Canada's emissions are associated with the production of oil and natural gas for export
- **Structure of industrial sector**
 - Canada has the highest industrial emissions per capita in the G7
- **Climate**
 - Canada has almost twice the number of Heating Degree Days as the average for other G7 countries
- **Population distribution**
 - Canada has the second highest population-weighted average distance between major cities of G7
- **Availability of clean electricity**
 - Canada generates 75% of its electricity from non-GHG emitting sources
 - Committed to increasing to 90% by 2020



- Common understanding and agreement on a relevant set of factors and indicators will be essential for comparing mitigation commitments
 - These need to capture the factors that are common to all countries as well specific national circumstances
 - Data should be comparable and transparent
- Further work on costs should be part of the 2009 work programme of the AWG-KP
 - This work should be coordinated with and inform the work on comparable effort under the AWG-LCA