



## Climate Change and Greenhouse Gases

The Intergovernmental Panel on Climate Change (IPCC), a scientific intergovernmental body tasked with assessing, among other things, the causes and risk of climate change, has concluded that:

“Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level.”

According to the IPCC, most of the observed increase in globally-averaged temperatures since the mid 20<sup>th</sup> century is very likely due to the observed increase in greenhouse gas (GHG) concentrations derived from human activities.

This has led to a number of global, national, provincial and state initiatives to reduce GHG emissions, including the United Nations Framework Convention on Climate Change. This international treaty sets an overall framework for intergovernmental efforts to tackle the challenges posed by climate change. The Kyoto Protocol is an addition to this treaty.

### ***Why are Canadian Companies Addressing Their GHG Emissions?***

- ✓ Climate change is a pressing global issue. At a company level, it is also a business and shareholder value issue, which has implications for strategy, risk management and financial performance. Governments around the world, including those in North America, are introducing legislation and regulations for the reduction of GHG emissions. Compliance with and/or failure to comply with these rules have financial consequences for companies – in effect, putting a “price on carbon”. This changing regulatory environment is leading many companies to manage and reduce their greenhouse gas emissions.
- ✓ In 2008, the Canadian government announced its regulatory framework requiring facilities in a number of industries to reduce 2006 greenhouse gas emissions intensities by 18% by the end of 2010. To enable this, the government introduced mandatory requirements for facilities in a range of industries to provide information on their 2006 GHG emissions by May 31, 2008. The government is also expected to implement an offset system for greenhouse gas emissions reductions trading that is expected to be open to all non-regulated activities.
- ✓ Individual provinces have taken steps to reduce GHG emissions. For example, Alberta enacted climate change regulations effective July 1, 2007, setting emissions intensity limits on greenhouse gas emissions of certain facilities. Effective 2007, Quebec instituted a carbon tax on fuel distributors, impacting certain corporations. British Columbia announced its intention to introduce legislation that would put into place a revenue-neutral carbon tax to be applied to a broad range of fossil fuels, effective July 2008. In April 2008, Manitoba also announced its intention to introduce climate change legislation, and became the first jurisdiction in North America to legislate its 2012 commitment to the Kyoto protocol.
- ✓ A number of Canadian provinces have joined with American states to develop regional strategies to address climate change. Such strategies are expected to include cap-and-trade emissions trading systems whereby companies that would be required to meet regulated caps could purchase emission reductions from other companies or individuals and use these reductions in meeting their caps.
- ✓ Many companies have already put processes into effect to prepare for this “carbon-constrained” future. Some have engaged in bi-lateral emissions trading on a voluntary basis; others have engaged in trading to meet existing regulatory requirements.

## ***GHG Emissions Trading Programs and GHG Emissions Registries***

- ✓ There are also significant initiatives in North America. In general, these initiatives seek to establish overall regional goals to reduce emissions, develop a form of emissions trading system to help achieve the reduction goals, and participate in a GHG registry to track emissions and emission reductions. Some examples include:
  - the government of Canada's announced regulatory framework that would establish an emissions trading system;
  - the Regional Greenhouse Gas Initiative (RGGI), involving a number of northeastern U.S. states with eastern Canadian provinces as observers, is expected to start in 2009;
  - the Western Climate Initiative, a regional and international initiative involving a number of western U.S. states and currently two Canadian provinces (British Columbia and Manitoba) with Ontario, Quebec and Saskatchewan participating as observers;
  - the Midwestern Greenhouse Gas Reduction Program, involving mid-western U.S. states and the province of Manitoba.
- ✓ A number of registries have been established to record and track emissions of GHGs. Some examples include:
  - the Greenhouse Gas Emissions Reporting Program, established in 2004 and operated by Statistics Canada requires Canadian facilities that emit 100,000 tonnes of carbon dioxide equivalent or more annually to submit their GHG emission information by June 1 of the following year;
  - the Climate Registry, to begin accepting data in 2008, is to be used by RGGI and the Western Climate Initiative and will accept data under both regulatory and voluntary programs;
  - the California Climate Action Registry was established by California statute as a voluntary registry for GHG emissions.
- ✓ The Montreal Climate Exchange, a joint venture of the Montreal Exchange and the Chicago Climate Exchange, is planning, subject to regulatory approval, to launch the trading of carbon futures contracts in mid 2008. Active carbon exchanges in other countries include the European Climate Exchange, launched in 2005, and the Chicago Climate Exchange, established in 2003.
- ✓ The most active emissions trading program currently is the European Union Emission Trading Scheme (EU ETS).
- ✓ Emissions trading programs are generally either baseline-and-credit programs or cap-and-trade programs. The anticipated Canadian emissions trading program is to be a baseline-and-credit system; the EU ETS is a cap-and-trade system.
- ✓ While each regulated program may have its own distinct rules for calculating GHG inventories, there are recognized methodologies to inventory greenhouse gas emissions. There are also recognized methodologies for providing assurance about reported information on greenhouse gas emissions.
- ✓ Some programs require third party verification of GHG emissions reported to governments. For example, in Alberta the annual compliance report on GHG emissions, due by March 31 of each year, must be verified. Only professional engineers and chartered accountants are authorized to provide these verification reports under the Alberta regulation.

It is expected that the Canadian GHG offset trading program will require third party verification.