

# Climate Change



## our challenge

Climate change is fundamentally an energy issue. Alberta is supplying energy to meet growing global demand for such things as fuel for transportation and to spur economic growth around the world. Achieving greenhouse gas emission reductions requires a prudent and unique set of actions.

## our actions \*

Alberta is regulating emissions from large industrial emitters and investing heavily in clean energy technology to reduce emissions at the source. Our actions allow Alberta to move in-step with North American climate policies.

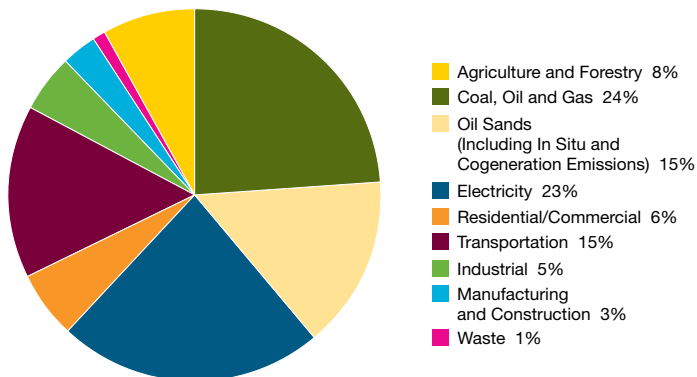
## regulating GHG emissions

- > Alberta regulates mandatory emission reductions from all large industrial emitters. These regulations include a price on carbon, a technology fund and a regulated offset market.
- > Alberta is the only jurisdiction in North America with mandatory reduction regulations for large emitters (>100,000 tonnes of per year) across all sectors.

## alberta's GHG profile

- > Alberta produces about one third of Canada's greenhouse gas emissions. The majority of emissions come from coal-fired electricity and oil and gas development.
- > The oil sands account for about 15 per cent of Alberta's emissions, which is equal to about 6.5 per cent of national emissions and less than 0.1 per cent of global emissions.
- > Alberta's increasing emissions also reflect that the province's population has grown 45 per cent since 1990, the highest rate of growth in Canada.

2008 Alberta Greenhouse Gas Emissions (244 Mt Total)



## investing in clean energy technology

- > Alberta is investing in clean energy technology to green energy production, promote biofuels, and change the way we produce and use energy.
- > We are focused on high-potential technologies that will reduce emissions at the source and for the long term.
- > Alberta's unique Climate Change and Emissions Management Fund helps companies comply with GHG regulations.
  - Since July 1, 2007, the fund has accumulated more than \$257 million that will be invested back into Alberta to develop new clean energy technologies.
  - As of April 2011, \$100 million has been invested into clean energy projects from this fund.
- > The Alberta government is investing \$25 million into Carbon Management Canada, a national, university-led research network housed at the University of Calgary that is developing insights, technologies and policies to reduce emissions in Canada's fossil fuel energy sector.

## carbon capture and storage

- > Alberta's \$2-billion investment in carbon capture and storage will result in a collection of projects, pipelines, storage and financing that is unique in the world.
- > Carbon capture and storage in Alberta will reduce emissions by 5 million tonnes annually beginning in 2015.
- > Alberta has signed a grant agreement for the Alberta Carbon Trunk Line which will create a pipeline system to transport CO<sub>2</sub>. Work is underway to finalize agreements for three additional projects that will:
  - Green oil sands supply at the upgrading stage (Quest Project)
  - Green electricity production at Alberta coal-fired electricity plants (Project Pioneer)
  - Produce clean energy with in-situ coal gasification (Swan Hills Synfuels Project)

## climate change action

- > 28 million tonnes of emissions avoided since July 1, 2007
- > \$257 million into a clean energy technology fund
- > \$2 billion for carbon capture and storage
- > \$15 per tonne carbon price
- > Almost eight million tonnes worth of emissions have been purchased on a regulated offset market
- > \$36-million energy efficiency consumer rebate program; 96,000 rebates provided as of January 2011
- > Five per cent renewable fuel standard for gasoline and two per cent for diesel



ALBERTA PRODUCES ABOUT 20 PER CENT OF CANADA'S WIND POWER.

## alberta's emissions target

