Environment Canada Environnement Canada

Canada

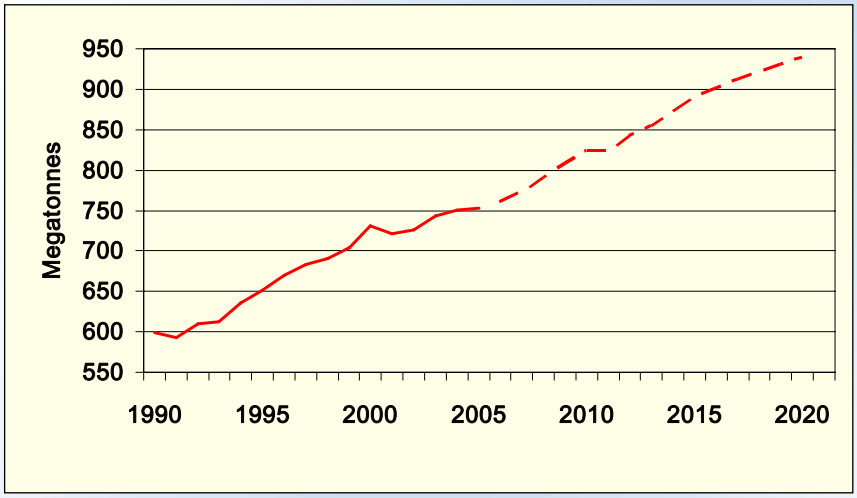
TURNING THE CORNER

TAKING ACTION to Fight Climate Change

Canada's greenhouse gas emissions have grown steadily since 1990

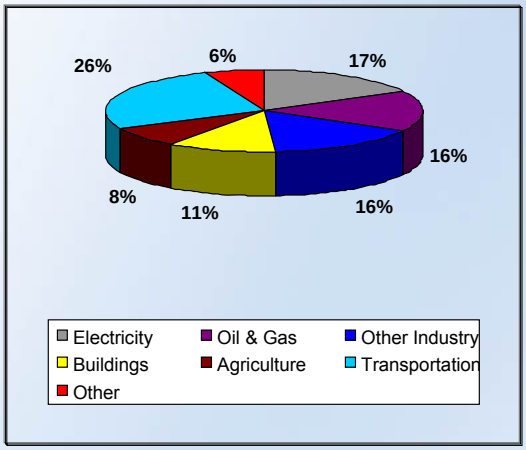
- At Kyoto, Canada committed to a target of 6% below 1990 levels
  - However, Canadian emissions have grown steadily since 1990
- Canada's annual greenhouse gas (GHG) emissions are currently more than 25% higher than they were in 1990 and 32% higher than Canada's Kyoto Protocol target
  - This growth is due in part to the continued expansion of Canada's production and export of oil & gas
- Without immediate action, our emissions from all sectors could increase by another 24% to reach 940 megatonnes in 2020

Canada's GHG emissions have grown steadily since 1990 and will continue to grow if action is not taken



3

Current GHG emissions in Canada

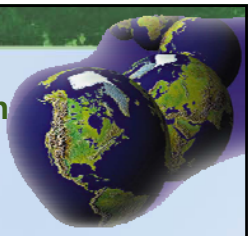


4

Canada is now taking aggressive action to achieve an absolute 20% reduction in GHGs by 2020

- The Government of Canada has now committed to reducing Canada's total emissions, relative to 2006 levels, by 20% by 2020 and by 60-70% by 2050
- The level of effort required to achieve these goals will be significant, as Canada has a growing population, a growing economy and increasing energy exports
- To achieve these goals, the government is implementing a series of ambitious regulatory and technology initiatives
- Most recently, the government has announced further details of one of the world's toughest regulatory regimes for industrial GHG emissions

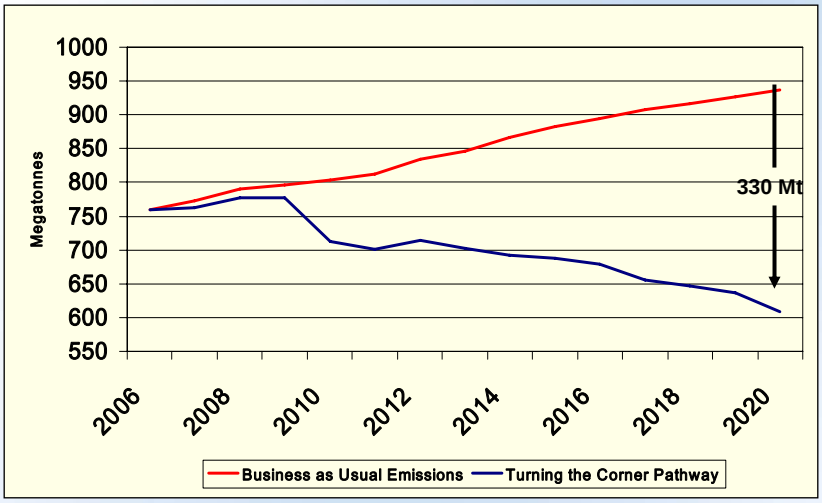
Canada's contribution to a global solution



- Canada's domestic action, including developing and deploying new technologies, will contribute to a global solution to the challenge of climate change
- Canada believes a new international climate change agreement should ensure global emissions are cut at least in half by 2050
- Canada is committed to playing an active and constructive role in the development of a new international agreement through the UNFCCC
- An effective new international agreement must include contributions from all major emitters, including the United States, China and India
  - While major developing economies can obviously not be expected to make the same kind of contributions as developed countries, the science clearly demonstrates that they must be part of the solution

TURNING THE CORNER:
Taking Action to Fight Climate Change

Canada is taking measures to achieve a 330 megatonne reduction from projected levels by 2020



7

TURNING THE CORNER:
Taking Action to Fight Climate Change

Canada's plan to cut GHG emissions consists of several elements including industrial regulations

Industrial GHG Regulation

Comprehensive regulations to force industry to cut GHG emissions

- Focusing on key sources of emissions, including oil sands and coal-fired electricity plants
- Setting up a carbon emissions trading market
- Establishing a market price for carbon
- Deploying new clean technologies

Clean Electricity

Action to build one of the world's cleanest electricity systems

Transportation

Regulation and investment to cut emissions from transportation

Buildings and Appliances

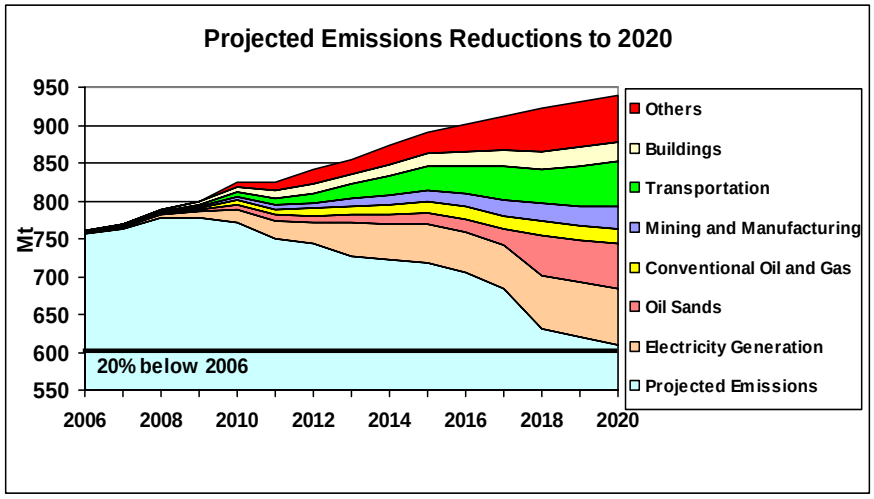
Action to cut emissions from buildings, appliances and equipment

Working Together

Working with the provinces and territories

8

Canada's emissions reduction pathway to 2020 will engage all sectors of the economy



9

TURNING THE CORNER:
Taking Action to Fight Climate Change

Industrial GHG Regulations

10

Canada will require industry to reduce emissions by 21% from current levels by 2020

- Canada's industrial greenhouse gas regulations will yield about half of the emission reductions required to meet our 2020 target
- These regulations will apply to all major industries, including oil sands, other oil and gas, electricity, petroleum refining, chemicals, pulp & paper, aluminum, cement, and iron & steel
- Regulated industries will be required to improve the emissions intensity of their existing facilities by 18% by 2010, and achieve 2% continuous improvement each year thereafter
  - Intensity reductions of this magnitude will yield absolute emission reductions even as the economy grows
  - Firms will, for a limited time, receive incentives to encourage them to invest in green technology development and deployment
- New facilities built by firms in regulated industries will have to meet stricter emissions standards based on the use of cleaner fuels

Target application by sector

- Three approaches to target application:
  - Facility-specific: Each facility within a sector receives an individual target of an 18% reduction from its own 2006 emission intensity
  - Sector-wide: All facilities within a sector face the same target – an 18% reduction from the sector's average 2006 emission intensity
  - Corporate-specific: Each company within a sector receives a target of an 18% reduction from the average 2006 emission intensity of its entire fleet of facilities

Sector	Target Application		
	Facility-based	Sector-wide	Corporate
Iron Ore Pelletizing	X		
Lime		X	
Potash	X		
Base Metal Smelting	X		
Chemicals	X		
Fertilizers[1]	X		
Iron & Steel, Titanium	X		
Oil Sands	X		
Pulp & Paper		X	
Petroleum Refining	X		
Aluminium & Alumina		X	
Cement		X	
Natural Gas Pipelines	X		
Upstream Oil & Gas	X		
Electricity			X

1) Indicative until decisions are made post Task Force

Minimum thresholds

- Minimum thresholds will be set in 5 sectors to avoid imposing unreasonable administrative costs on small facilities, while still ensuring appropriate coverage of emissions
- In all other sectors, all facilities will be covered by the regulations

Sector	Proposed threshold
Chemicals	50 kt CO_2e
Fertilizers (Nitrogen-based)[1]	50 kt CO_2 e
Natural Gas Pipelines	50 kt CO_2e
Upstream Oil & Gas	10,000 barrels / day (per company) and 3 kt CO_2e per facility
Electricity	10 MW

1) Indicative until decisions are made post Task Force

13

Canada's regulatory system will apply to all industries and get tougher over time

Regulations start tough and get tougher

TOUGH

For old facilities in all industrial sectors: mandatory reductions starting in 2010 and becoming tougher every year

TOUGHER

For new plants in key sectors coming on stream in 2004 and later: tougher emission targets to drive adoption of cleaner fuels and technologies

TOUGHEST

For oil sands and power plants coming on stream in 2012 and later:

- An end to new dirty coal plants
- Effectively requiring that oil sands use carbon capture and storage or other green technology to drastically cut greenhouse gas emissions

14

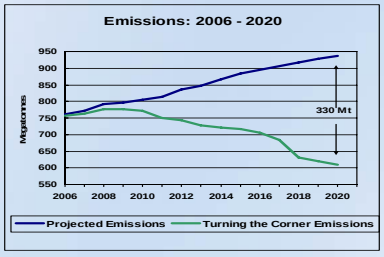
Canada's regulations will effectively require the use of carbon capture & storage

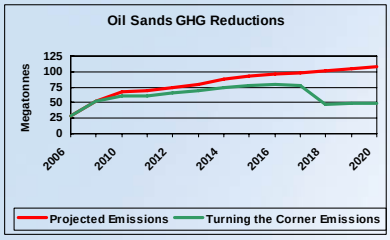
- The electricity generation and oil & gas sectors currently produce 33% of Canada's greenhouse gas emissions
  - The oil sands are one of Canada's greatest natural resources, and a major engine of our economy
  - The government recognizes, however, that we have a responsibility to future generations to ensure that they are developed in an environmentally responsible way
- New oil sands plants and coal-fired electricity plants that begin operation in 2012 or later will be required to meet targets based on carbon capture & storage or equivalent technology to significantly reduce their greenhouse gas emissions

15

The Oil Sands Challenge

- *Turning the Corner* will result in national absolute greenhouse gas emission reductions by about 2010
  - However, due to rapid growth production, oil sands emissions will continue to increase for several years, albeit at a slower rate than projected levels
- A tougher stance on oil sands is necessary to ensure environmentally responsible growth
- The 2018 target for new facilities based on carbon capture and storage will mean that oil sands emissions will be cut by more than half from 2020 projected levels





16

A carbon emissions trading market is a key element of the plan

- Canada is setting up a domestic carbon trading market and plans to eventually link up with international markets
  - Beginning in 2010, firms that fall short of their targets will be able to buy credits on Canada's domestic carbon emissions market
- Canada will also create a domestic offset system that will create market incentives for incremental, real and verified emission reductions in other sectors of the economy, such as agriculture and forestry
- Firms will be able to purchase credits from the *Kyoto Protocol's Clean Development Mechanism* to meet up to 10% of their target, but the Government of Canada will not buy international emission credits to meet its 2020 target

17

Technology Fund

- Firms may contribute to a technology fund as a means of compliance for the 2010-2017 period, subject to limits
  - As percent of total regulatory obligation: 70%, 65%, 60%, 55%, 50%, 40%, 10%, 10%
  - Contribution rate in $/tonne: $15, $15, $15, $20, $20 escalating with GDP
- A further 5 Mt/year of credits will be available through the research and development component
- Technology fund will take a portfolio approach to investment in a range of deployment and development projects
- Fund will seek ownership of resulting emission reductions based on project cost

18

Maximizing the use of the pre-certified investments will facilitate the uptake of carbon capture and storage

- Firm will be eligible to receive credits for investing directly in large-scale and transformative projects, either its own or joint-venture projects, selected by the firm from a menu set out by the federal government
- Eligible firms may contribute up to 100% of their regulatory obligation in pre-certified investments in carbon capture and storage projects
  - Eligibility limited to firms that can make direct use of the technology in the following sectors: oil sands, electricity, chemicals, fertilizers, and petroleum refining

19

TURNING THE CORNER:
Taking Action to Fight Climate Change

Offset System

- Credits will be issued for incremental real, verified domestic reductions or removals of greenhouse gas emissions in activities outside the regulations
- Only emission reductions or removals that take place after January 1, 2008 may generate credits
  - And only projects that began to achieve reductions after January 1, 2000 will be eligible
- The Offset System has been launched
  - Companion document on the design of the Offset System has been released
- Guide for protocol developers will be published this spring, with guide for project proponents and verification bodies following in summer
- Government will begin reviewing project applications in the fall

20

Credit for Early Action and the Clean Development Mechanism

- Credit for Early Action Program
  - Firms that took verified early action to reduce emissions will be eligible for a one-time allocation of 15 Mt in credits
    - 5 Mt credits issued in each of the years 2010, 2011, and 2012
  - Reductions must have been achieved between 1992 and 2006 and be the result of an incremental process change or facility improvement
  - Companion document has been released for public comment until May
    - Phase 1 submissions will be accepted until late June
    - Allocation decisions will be made by summer 2009
- Clean Development Mechanism
  - Firms may use credits from the Kyoto Protocol's Clean Development Mechanism – with the exception of credits from forest sink projects – for up to 10% of their regulatory obligation

21

Reporting requirements

- Under CEPA 1999, a Section 71 Notice was published on December 8, 2007 requiring specified industrial sectors to provide information on emissions of air pollutants and greenhouse gases for 2006
  - The information collected will support the development and implementation of regulations
  - The deadline to comply with the Notice is May 31, 2008
- Reporting and quantification requirements will be part of the proposed regulations
  - Provinces, industry and NGOs will be engaged

22

Federal government will work towards equivalency agreements on industrial regulations

- The federal government will work to reach equivalency agreements with any interested provinces that have enforceable regimes providing equivalent or better environmental outcomes to the federal regime
- Initial discussions focusing on information sharing and cooperation have already taken place with Alberta and B.C.
  - Building on excellent federal-Alberta working relationship

23

Next steps

- Draft regulations are expected to be published in *Canada Gazette, Part I* for public comment in fall 2008
- Final regulations are expected to be approved and published in *Canada Gazette, Part II* in fall 2009
- Greenhouse gas provisions of the regulations are to come into force, as planned, on January 1, 2010
- Air pollutant elements will be added to the draft regulations once the regulatory framework for air pollutants has been finalized in spring 2008

24

Our actions will result in major changes in the way Canadians produce and use energy

- Achieving an absolute reduction of 20% by 2020 will place Canada on the pathway to reduce emissions by 60%-70% by 2050
- Canada's energy efficiency will improve by some 20%
- 90% of electricity will be produced from sources that do not produce greenhouse gases
- Canada will be a world leader in carbon capture and storage and clean energy production
- Canada will have an active domestic carbon market, with permit prices expected to hit $65 per tonne by 2018

25