10 THINGS
YOU SHOULD KNOW ABOUT
CARBON CAPTURE *and* STORAGE (CCS)

Carbon Capture and Storage (CCS) is the process whereby CO_2 emissions are captured from large industrial facilities before being emitted to the atmosphere, transported through pipelines, and permanently stored in deep, secure underground formations. Here are 10 things to know about this important technology:

1 CCS IS A GLOBAL PRIORITY

The world will not be able to meet emission reduction targets without CCS. The International Energy Agency (IEA) has highlighted CCS as one of six crucial technologies for battling climate change, accounting for nearly 20% of reductions.

> "CCS is an important part of the lowest-cost greenhouse gas (GHG) mitigation portfolio. IEA analysis suggests that without CCS, overall costs to reduce emissions to 2005 levels by 2050 increase by 70%."
>
> – International Energy Agency

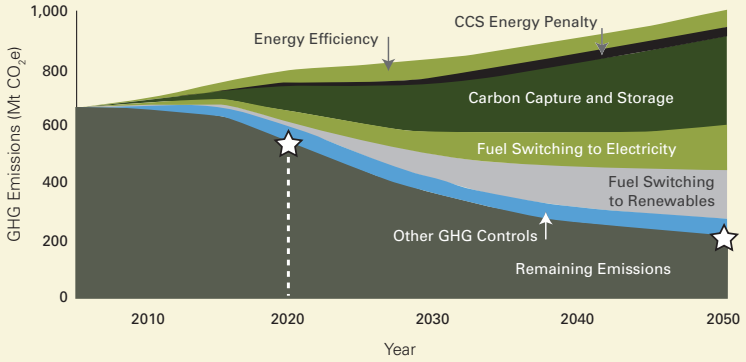
2 CCS IS A KEY COMPONENT OF CANADA'S ENERGY STRATEGY

Carbon capture and storage will allow Canada to *sustainably develop fossil fuel resources* and continue to have a strong economy in a carbon-constrained world. By reducing emissions from industry, CCS will help with the transition to low-carbon energy sources.

3 CCS WILL REDUCE LARGE VOLUMES OF CO_2 EMISSIONS IN CANADA

CCS has been identified as the ***single largest tool*** for reducing CO_2 emissions in Canada over the next 40 years.

GHG Reduction Diagram for Canada

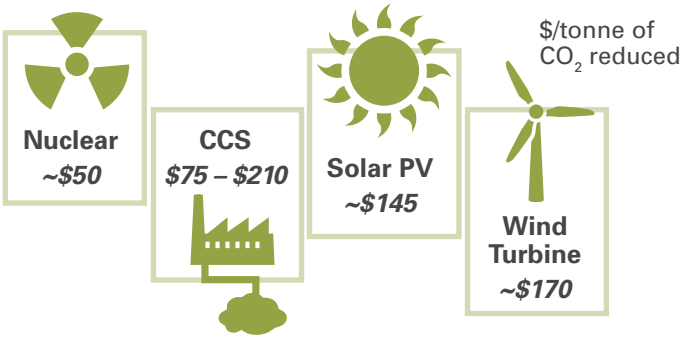


Source: National Round Table on the Environment and the Economy "Achieving 2050: A Carbon Pricing Policy for Canada", 2009

☆ *Government of Canada Emission Reductions Targets in 2020 and 2050*

4 CCS COSTS COMPARE WITH OTHER OPTIONS

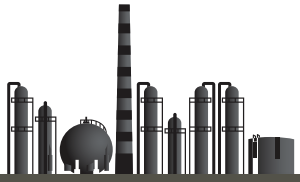
Carbon capture and storage is ***in the same cost range as other CO_2 reduction options*** such as wind and solar. Although it is currently expensive to implement CCS, like any technology the costs will come down as we learn more about the process and deploy it across the globe.



Source: Delphi Group, 2009 ICO_2N GHG Alternatives report

5 CCS HAS BROAD POTENTIAL IN MANY INDUSTRIES

Carbon capture technology will work on large emission sources at industrial facilities. Small exhaust streams such as those from a vehicle's tailpipe or individual homes are not suitable for efficient capture.



Industries where CCS is applicable:

- Coal-fired power plants
- Oil and gas operations, including the oil sands
- Fertilizer and chemical industries
- Cement manufacturing

The Sleipner project has been operating in Norway **since 1996**

The USA has been using CO_2 for enhanced oil recovery **since the 1970s**

The Weyburn project in Canada has been operating **since 2000**

6 CCS IS A PROVEN TECHNOLOGY

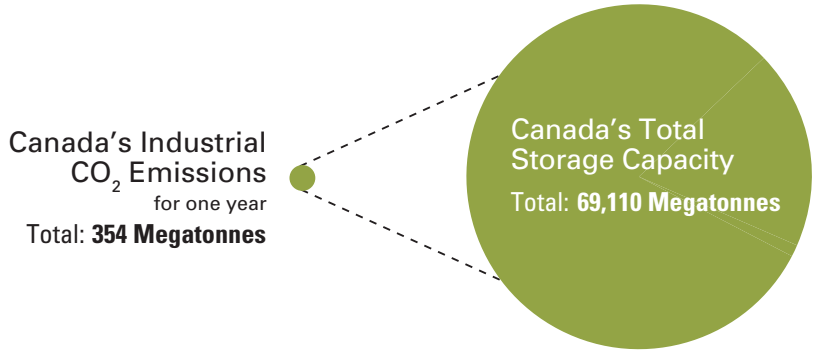
CCS is a combination of ***proven technologies*** that have been ***used for decades***, around the world.

7 CARBON STORAGE CAN BE DONE SAFELY

CO_2 will be stored in porous rock at geological depths of ***1 to 5 kilometres below the surface***, sealed by layers of impermeable rock. Geological trapping mechanisms make CO_2 storage more secure with time. This, in combination with proper site selection and robust monitoring systems, will ensure permanent storage.

8 CANADA HAS VAST CO_2 STORAGE POTENTIAL

Canada has extensive geological storage potential across the country that is estimated to be able to ***store well over a hundred years worth of Canada's industrial emissions***.



Source: NETL and US DOE Carbon Sequestration Program

9 ENHANCED OIL RECOVERY (EOR) WILL HELP TO GET CCS STARTED

EOR will create additional revenue from incremental oil production, while simultaneously storing CO_2. This will help to offset the high costs of CO_2 capture and get initial CCS projects off the ground.

[EOR IS THE PROCESS OF INCREASING RECOVERY OF OIL BY INJECTING CO_2 INTO A NEARLY DEPLETED RESERVOIR. THIS INCREASES PRESSURE AND IMPROVES THE FLOW OF THE OIL.]

10 GOVERNMENT AND INDUSTRY MUST WORK TOGETHER TO ADVANCE CCS

CCS projects are large and have high up front costs. It is important that government and industry work together to develop CCS and advance deployment.

WHO IS ICO_2N?

ICO_2N is the Integrated CO_2 Network, a network of Canadian companies committed to the deployment of Carbon Capture and Storage in Canada to help meet climate change objectives while supporting economic growth.

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