

Alberta

Freedom To Create. Spirit To Achieve.

Ports-to-Plains Alliance 2010 Energy Summit

Honourable Iris Evans
Minister of Alberta International and
Intergovernmental Relations

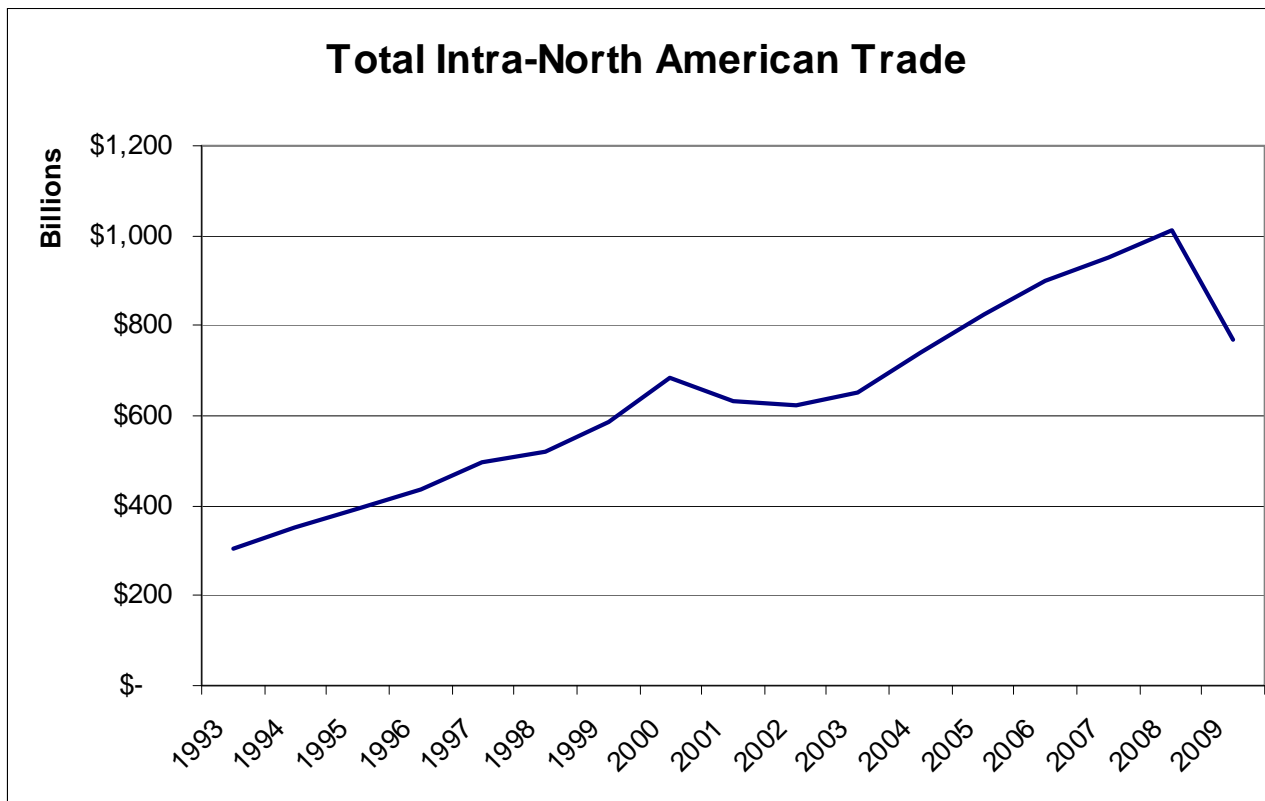
Government
of Alberta

1. North American Partnership

United States and Canada

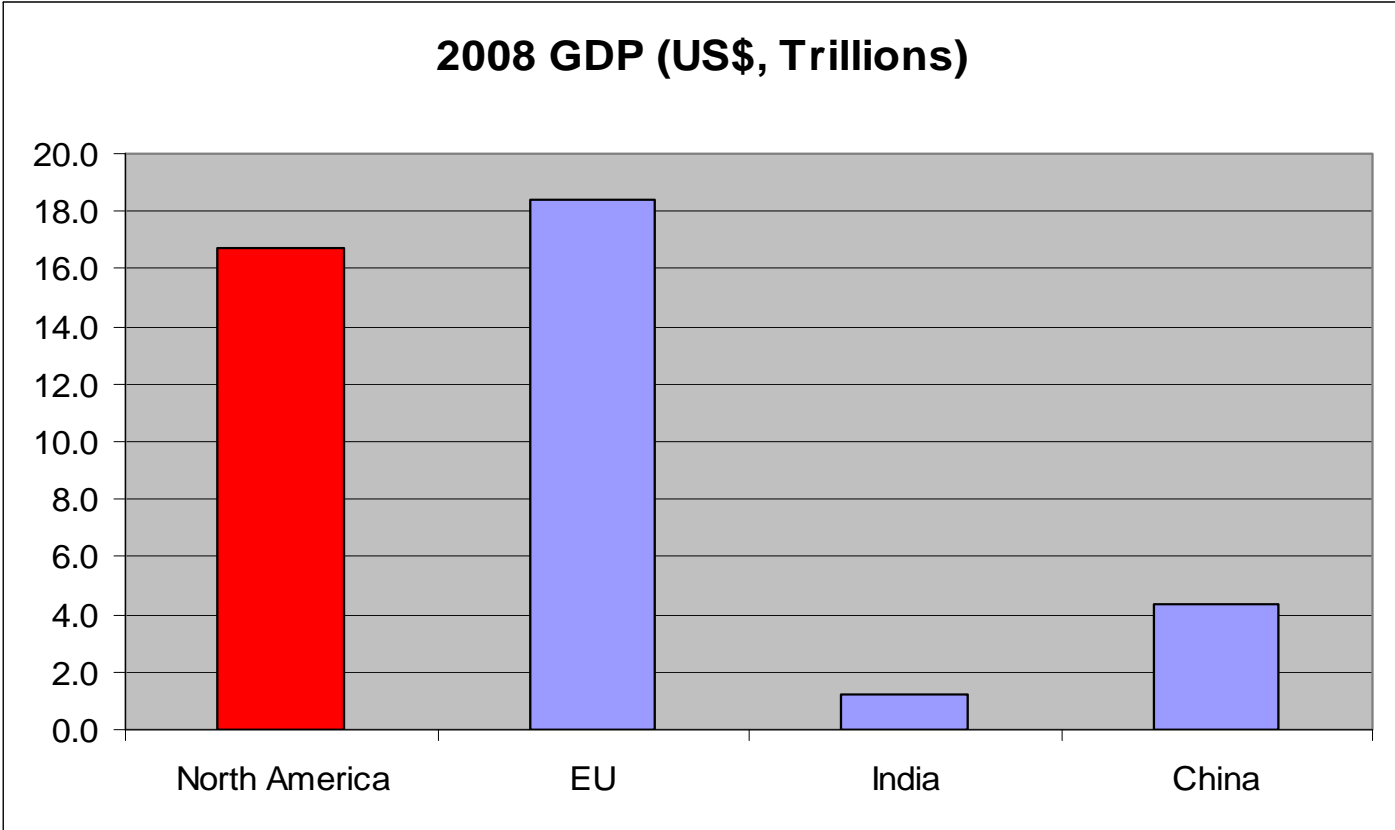
- History of economic and political cooperation
- Sustaining the relationship
- Importance of partnership and collaborative forums

2. North America – Trade



**Since 1993,
total trade
between
NAFTA
partners has
increased
240%**

3. North America – Global Context



4. Ports-to-Plains

Mission:

- *A grassroots alliance of communities and businesses whose mission is to advocate for a robust transportation infrastructure to promote economic security and prosperity throughout North America's energy and agricultural heartland.* (www.portstoplains.com/Mission.aspx)

The Bottom Line:

- To make North America more globally competitive

5. Increasing our Competitiveness

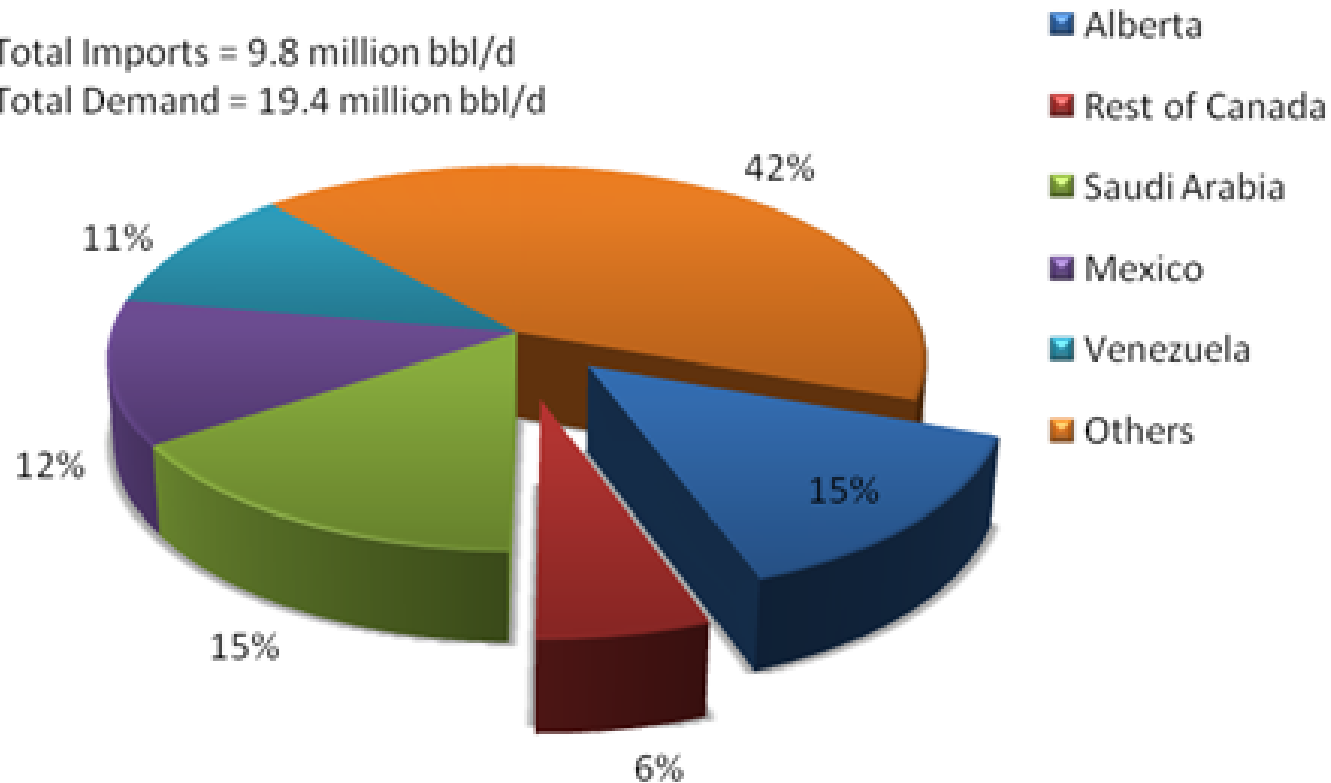
- Build on our strengths
- Safe and secure energy supply
- Develop new opportunities
 - Enhanced oil recovery and new extraction techniques
 - New technologies that protect the environment

6. Changing Global Energy Landscape

- We are at a crossroads in the history of energy development.
 - Drive towards cleaner energy.
 - Balance between energy security, economic prosperity and environmental responsibility.

2008 U.S. Crude Oil Imports by Place of Origin

Total Imports = 9.8 million bbl/d
Total Demand = 19.4 million bbl/d



In 2008, the United States imported 21% of its crude oil from Canada, 15% of which came from Alberta.

Note: Totals do not add up to 100% due to rounding

Energy Development in Alberta



CANADA

USA

MEXICO

ALBERTA

• High Level

Fort McMurray •

• Peace River

• Grande Prairie

Edmonton ○

• Jasper

• Red Deer

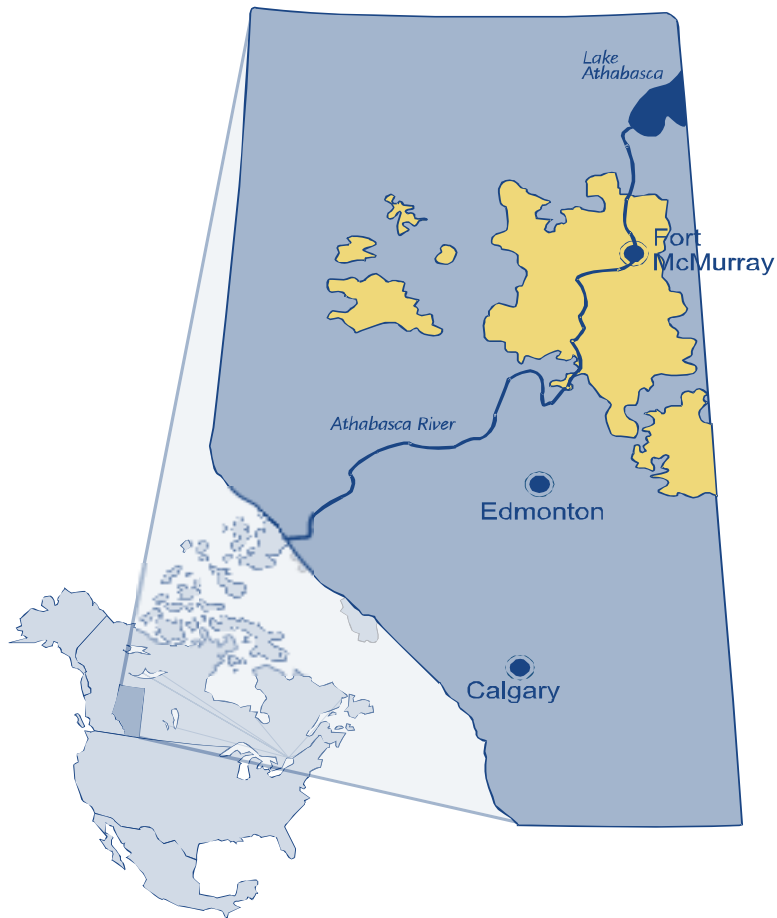
Banff •

• Calgary

Medicine Hat •

• Lethbridge

7. Alberta's Oil Sands



- Oil sands deposits underlie 54,903 square miles.
- Mineable deposits = 1,853 square miles (about 1.25% of Alberta's Boreal forest area).
- Land disturbed to date for mining = about 232 square miles.
- Oil is extracted through surface mining or enhanced oil recovery processes.



8. Oil Sands: Surface Mining

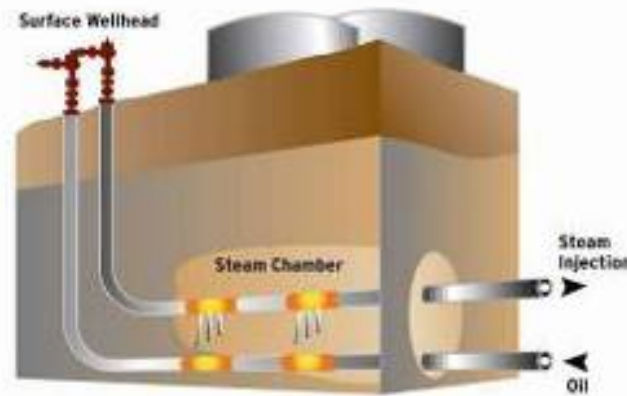
Surface Mining:

- 55% of current oil sands production
- Extraction process separates bitumen from tailings

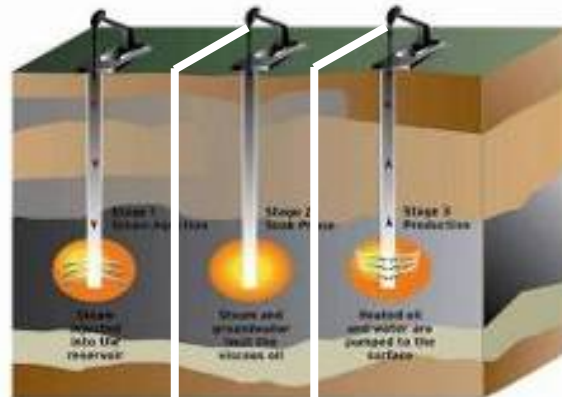


9. Oil Sands: In Situ Recovery

Steam-Assisted Gravity Drainage



Cyclic Steam Process



In Situ Recovery:

- 80% of resource
- 45% of production
- No tailings ponds
- No water from the Athabasca River

Oil Sands: In Situ Recovery



Courtesy of OPT/Nexen:
The Long Lake Project'

10. Alberta's Energy Vision

- Provincial Energy Strategy
 - Clean energy production, wise energy use, and sustained economic prosperity
- 20-year Oil Sands Strategy
 - Economic development
 - Environmental stewardship
 - Innovative, responsible and collaborative development amongst all stakeholders
 - Clean, healthy and vibrant communities

11. Environmental Responsibility

a. Legislated Emissions Targets

- Only jurisdiction in North America with mandatory reduction targets for large emitters
- Emitters contribute to a clean energy technology fund

b. Water for Life Strategy

- \$600 million invested to date to champion a safe, secure drinking water supply

c. Land Use Framework

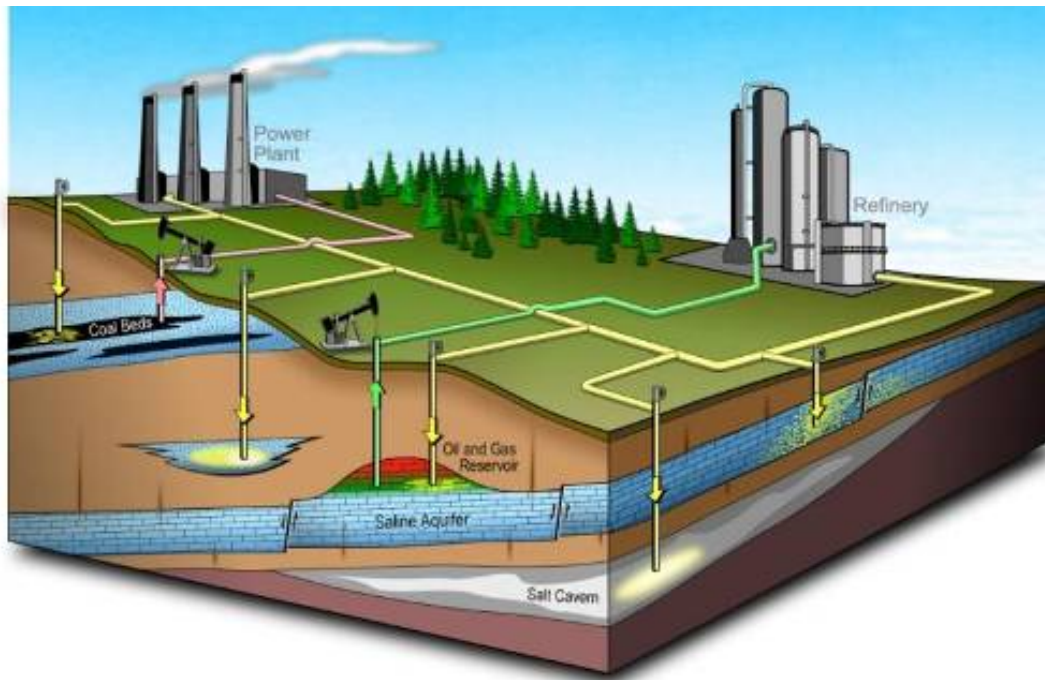
- Industry required by law to achieve project reclamation requirements as a condition of further development

Oil Sands Reclamation: Before and After



12. Environmental Responsibility (cont.)

d. Carbon Capture and Storage



- Invested \$2 billion to develop 4 large-scale CCS projects
- Goal is to substantially reduce emissions
- Value-added opportunities

13. Environmental Responsibility (cont.)

e. Advancement of New Technology

- Collaboration between government, industry, academic and research institutes
- Clean Energy Technology Fund



14. Economic Impact of the Oil Sands

- \$1 invested in the oil sands creates about \$9 worth of economic activity
 - One-third is generated outside Alberta
- Job creation
- Training of skilled workers
- Increased demand for services and supplies that support oil sands activities

Source: "The Impacts of Canadian Oil Sands Development on the United States' Economy". Canadian Energy Research Institute, October 2009.

15. Economic Impact – US Output and GDP

Impact of Alberta Oil Sands development on the U.S. Economy

- Increase in U.S. output (\$US):
 - 2010 = \$23 billion
 - 2015 = \$69.2 billion
 - 2020 = \$78.5 billion
 - 2025 = \$80.9 billion
- Change in U.S. GDP (\$US):
 - 2010 = \$11.5 billion
 - 2015 = \$34 billion
 - 2020 = \$40.4 billion
 - 2025 = \$42.2 billion

Source: "The Impacts of Canadian Oil Sands Development on the United States' Economy". Canadian Energy Research Institute, October 2009.

16. Economic Impact – U.S. Jobs

Indirect and induced impacts of Canadian oil sands development and production will result in employment increases across the U.S. Incremental employment is estimated to be (in person years):

- 2009-2010 = 172,000
- 2011-2015 = 343,000
- 2016-2020 = 88,000
- 2021-2025 = 22,000

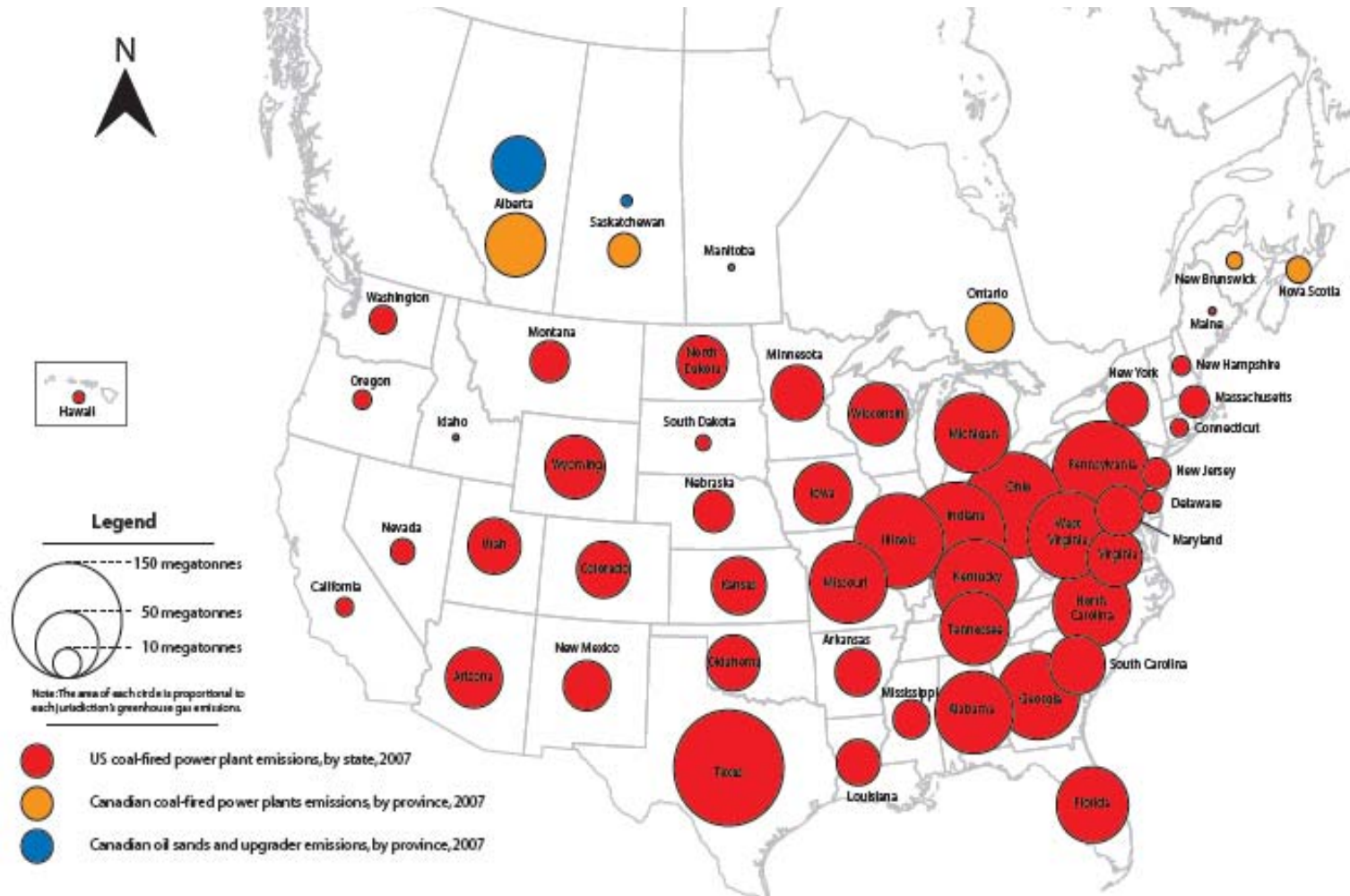
Source: "The Impacts of Canadian Oil Sands Development on the United States' Economy". Canadian Energy Research Institute, October 2009.

17. Economic Impact - Colorado

- Increase in **Colorado** output (\$US):
 - 2010 = \$374 million
 - 2025 = \$1359 million
 - Annual Average = \$1015 million
- Change in **Colorado** GDP (\$US):
 - 2010 = \$198 million
 - 2025 = \$740 million
 - Annual Average = \$542 million
- Incremental **Colorado** employment (person years):
 - 2009-2010 = 3000
 - 2011-2015 = 6000
 - 2016-2020 = 1700
 - 2021-2025 = 500

Source: "The Impacts of Canadian Oil Sands Development on the United States' Economy". Canadian Energy Research Institute, October 2009.

18. A Shared Challenge



19. Moving Forward in an Integrated Energy Market

- We have a long way to go...and we can improve
 - Willingness to integrate our thinking and act together
 - Knowledge transfer is key
 - Openness to explore new energy sources
 - Meet and beat consumer expectations
 - Inform the consumer
 - Look beyond traditional boundaries
 - Stay informed
 - Watch the competition

Thank You