



# Alberta's Oil Sands

**Resourceful. Responsible.**

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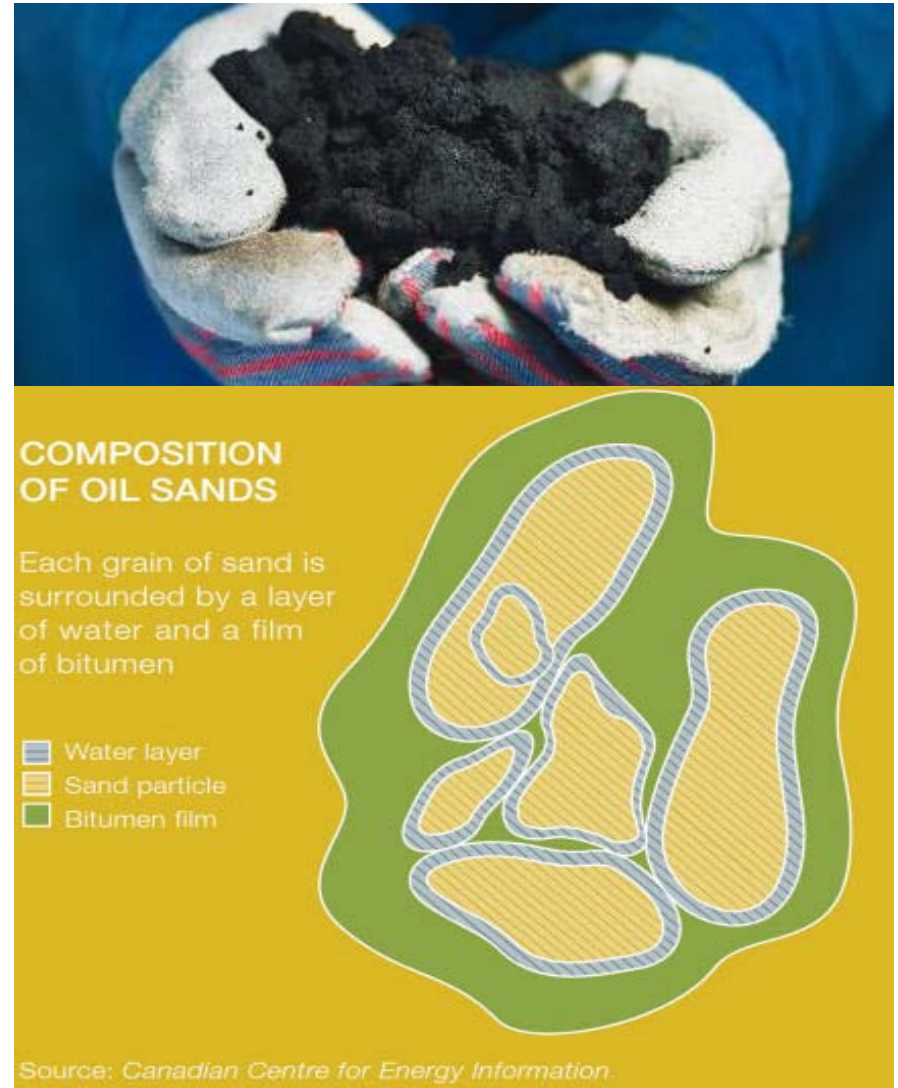


# Where are the oil sands?



# What are the oil sands?

- Naturally occurring mixture of sand, clay, water and bitumen – a very heavy oil
- Bitumen is separated from the sand and upgraded to refinery-ready crude oil



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# Oil sands: In situ and Mining

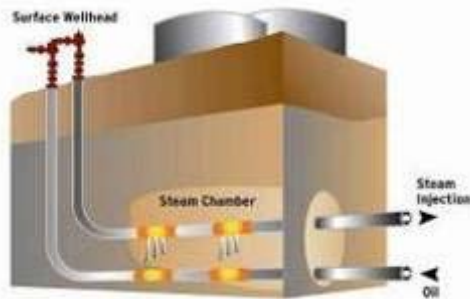
## Mining



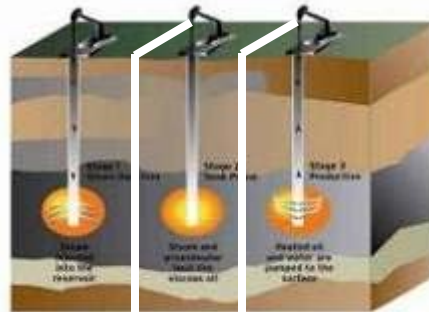
- 20% of resource
- 55% of production

## In situ

### Steam Assisted Gravity Drainage



### Cyclic Steam Process

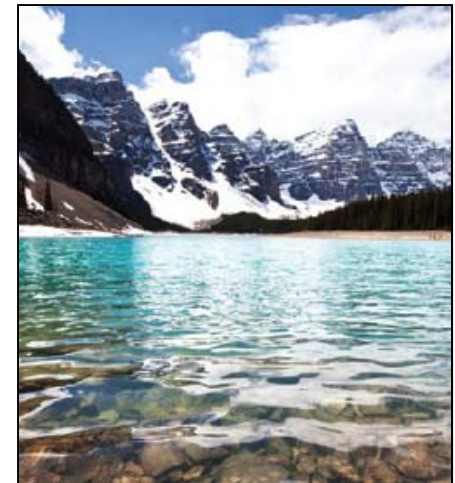


- 80% of resource
- 45% of production

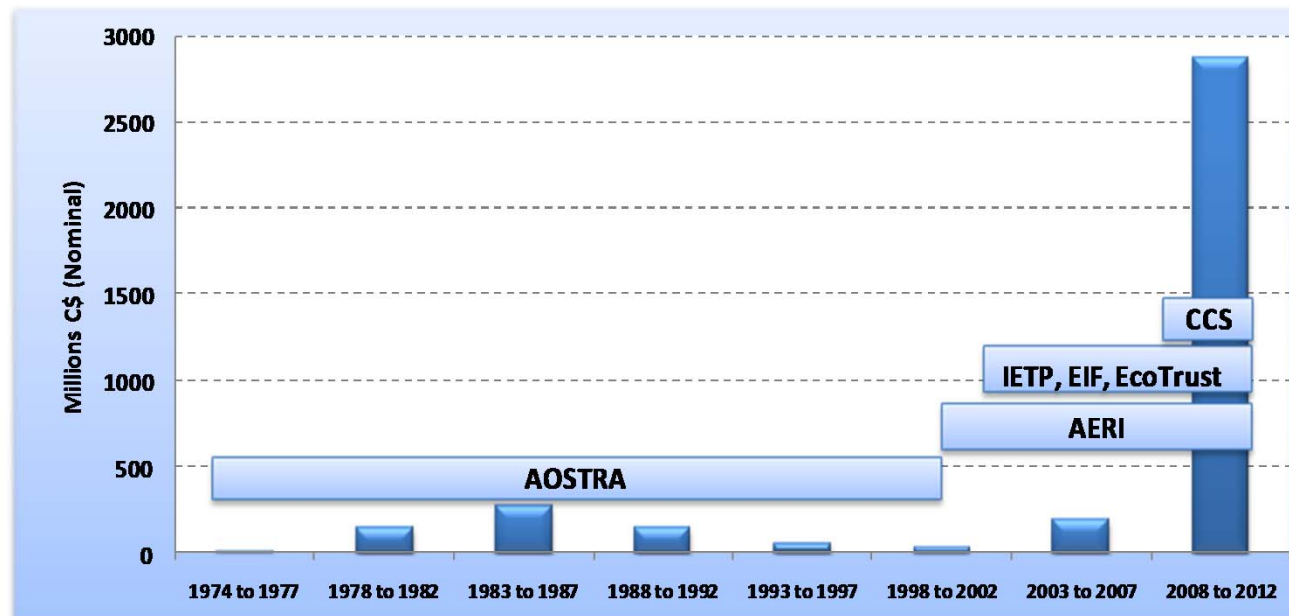


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# Technology Investment in Alberta



- Alberta's Oil Sands are built on Innovation
- Carbon Capture and Storage Investments
- Alberta Innovation System
- COSIA



# Climate Change and Emissions Management Fund

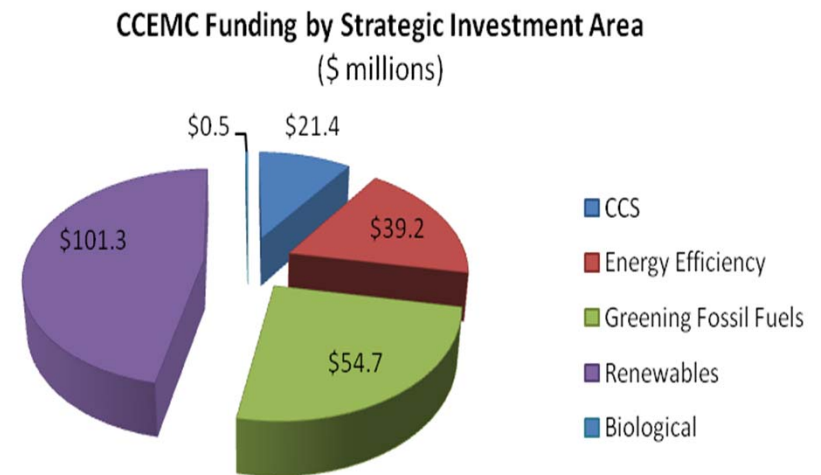


## Mission

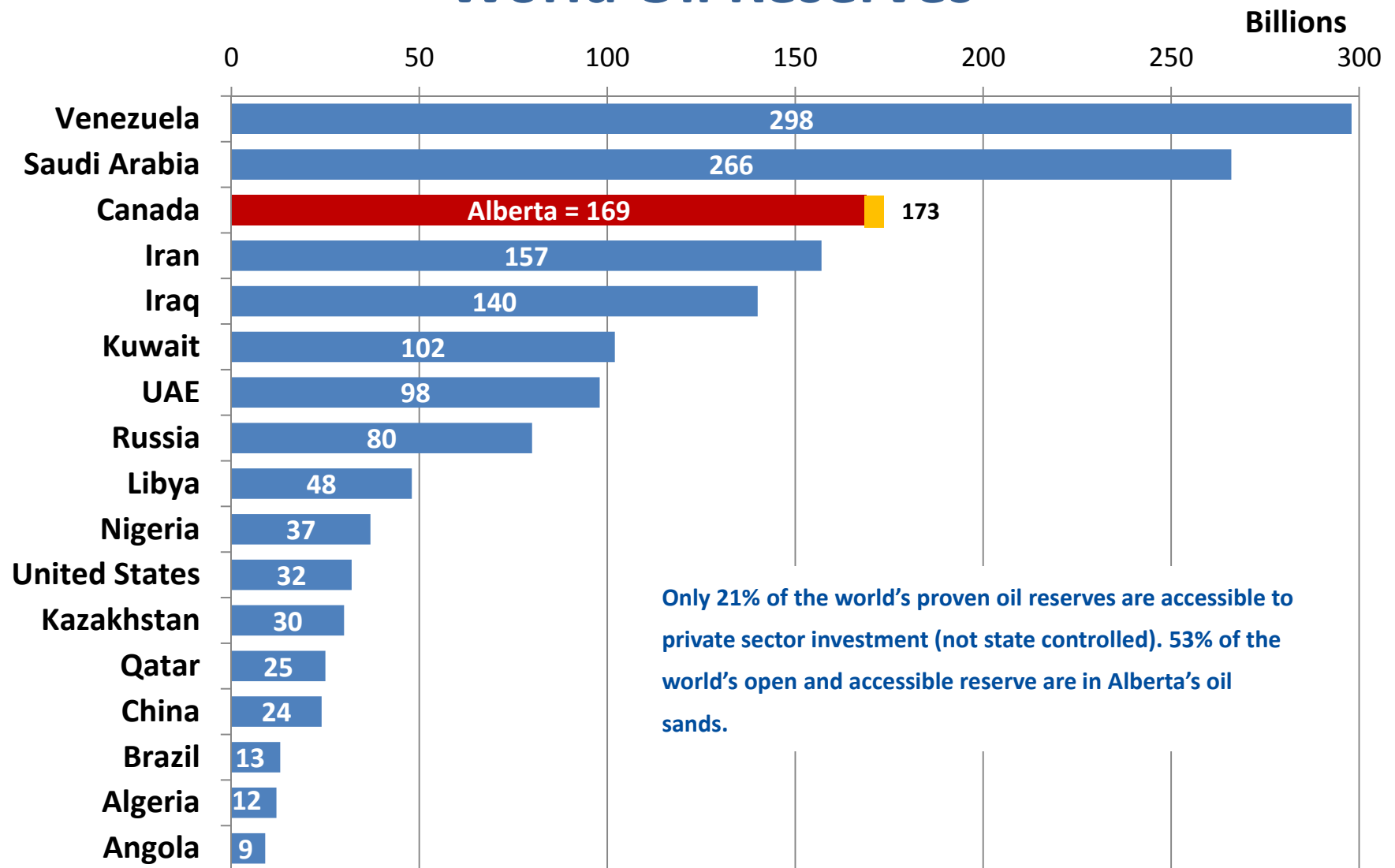
- The CCEMC was created to be a key part of Alberta's climate change strategy and movement toward a stronger and more diverse lower carbon economy.

## Results

- As of June 2013, there has been \$398 million collected in the fund
- In total, the CCEMC now supports 51 clean tech projects with \$212.8 million in committed funding.
- Estimated annual reductions of 1.7 Mt/year
- Estimated reductions of 13 Mt over 10 years



# World Oil Reserves



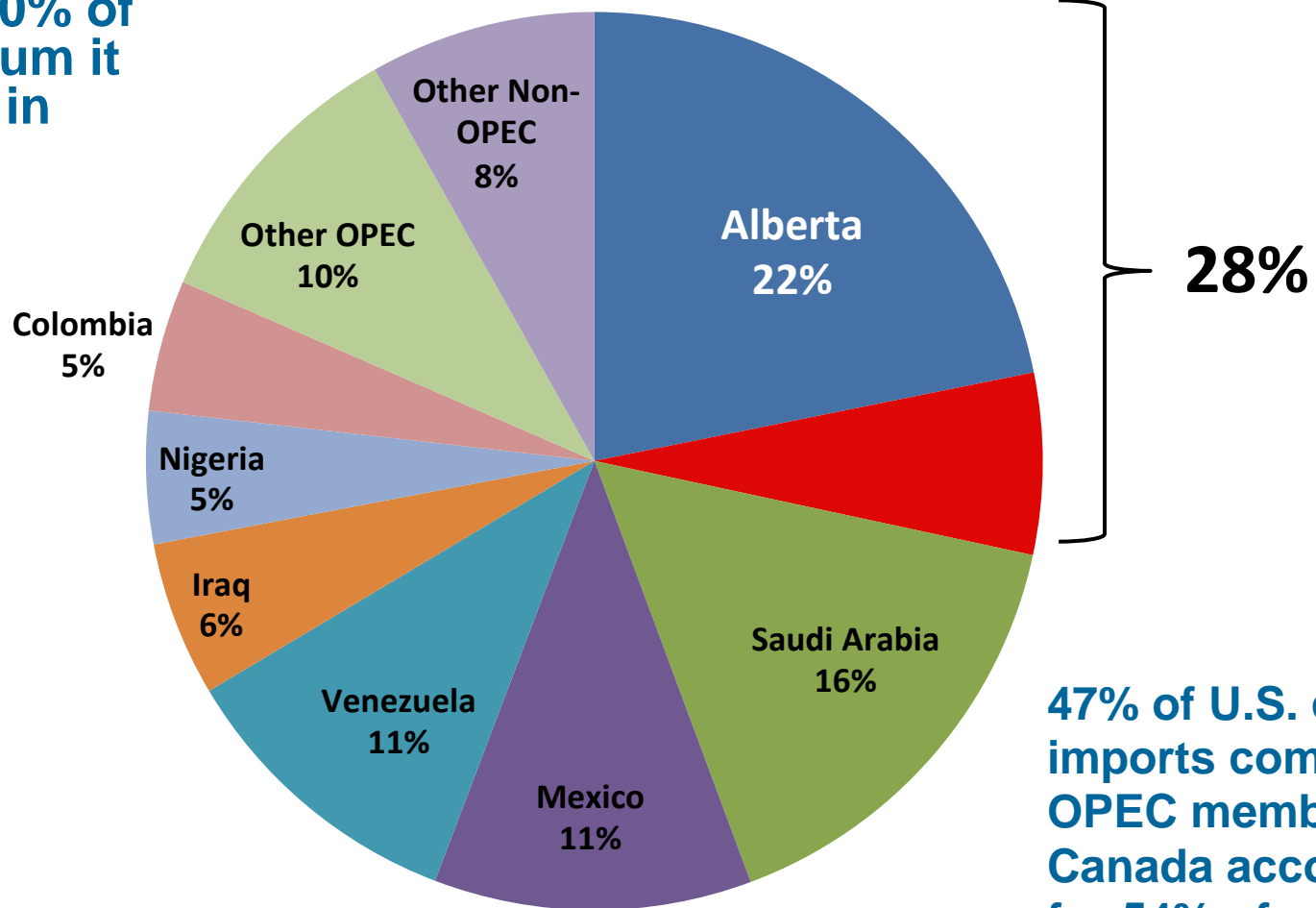
Source: Oil & Gas Journal January 1, 2014



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# Sources of U.S. Crude Oil Imports 2012

The U.S. imported 40% of the petroleum it consumed in 2012



47% of U.S. crude imports come from OPEC members—Canada accounts for 54% of non-OPEC imports

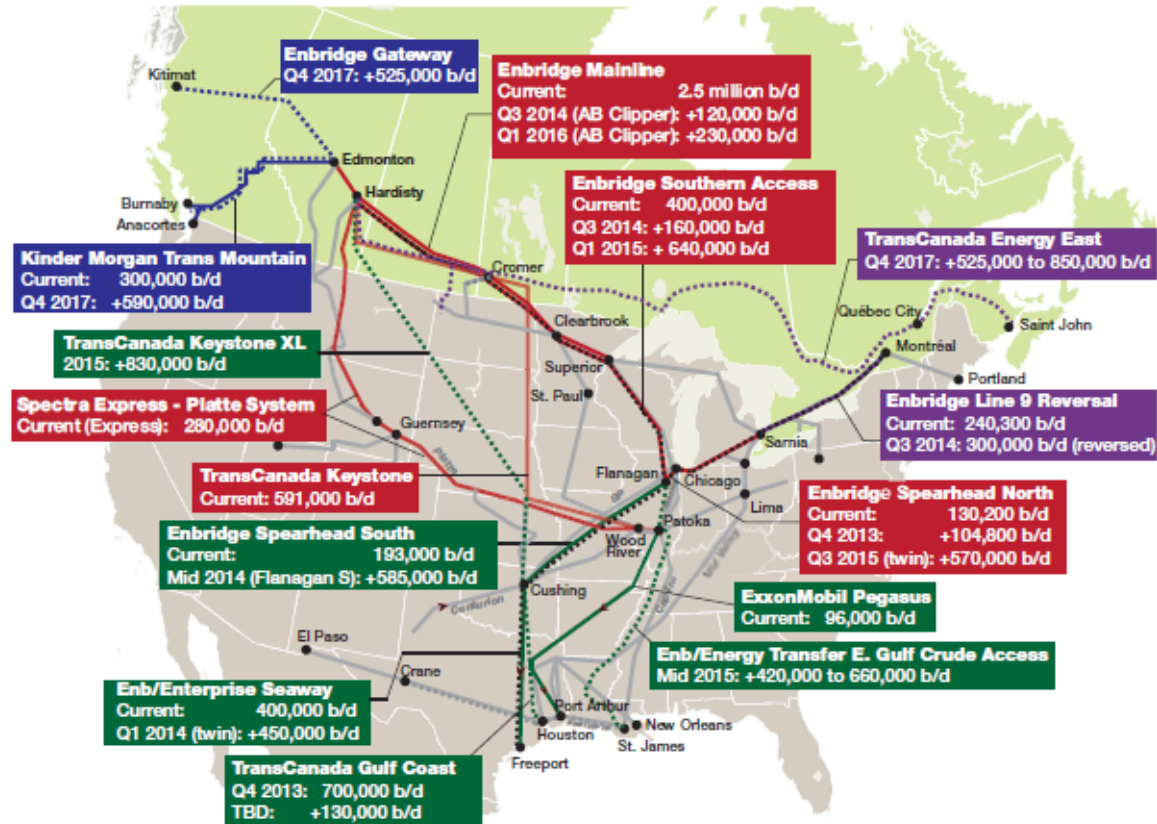


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# Existing and planned pipeline capacity

Canadian & U.S. Crude Oil Pipelines and Proposals



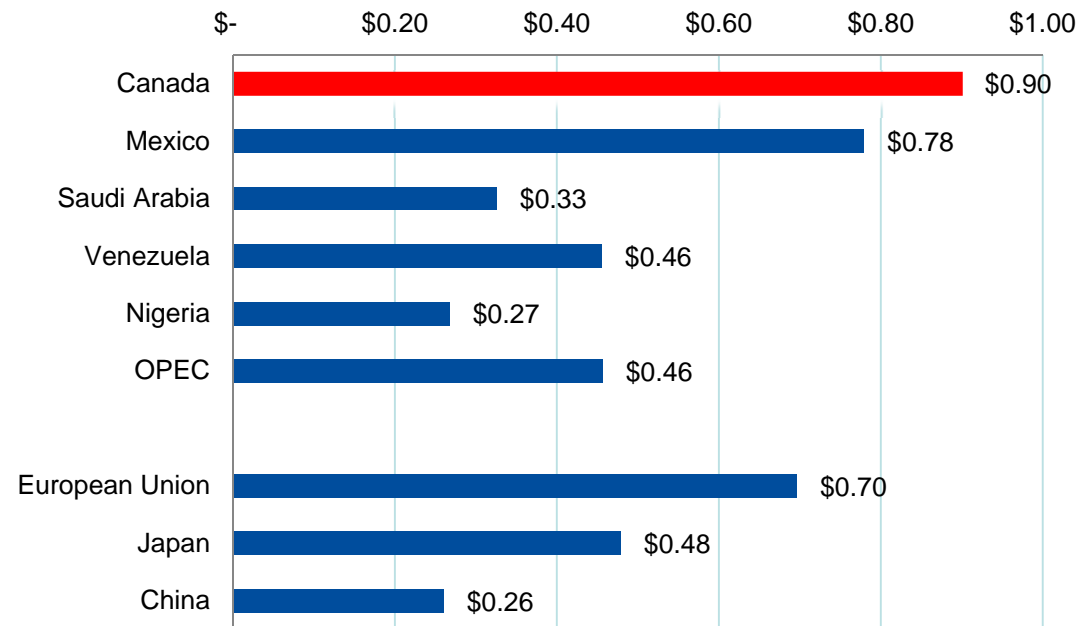
Source: CAPP

- Alberta supports all safe and environmentally responsible options to diversify and expand market access



# Economic Impact in the U.S.

For every dollar spent on imported goods in 2012, this is how much returned to the U.S. through exports



- The value of Alberta crude oil exports to the U.S. in 2012 were \$57 billion.
- 90% of 57 billion = \$51.3 billion in return U.S. exports to Canada.

Source: U.S. Census Bureau and Statistics Canada, 2012



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Thank You



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