



Energy Development in Canada

NARUC Committee on International Relations

July 15, 2007

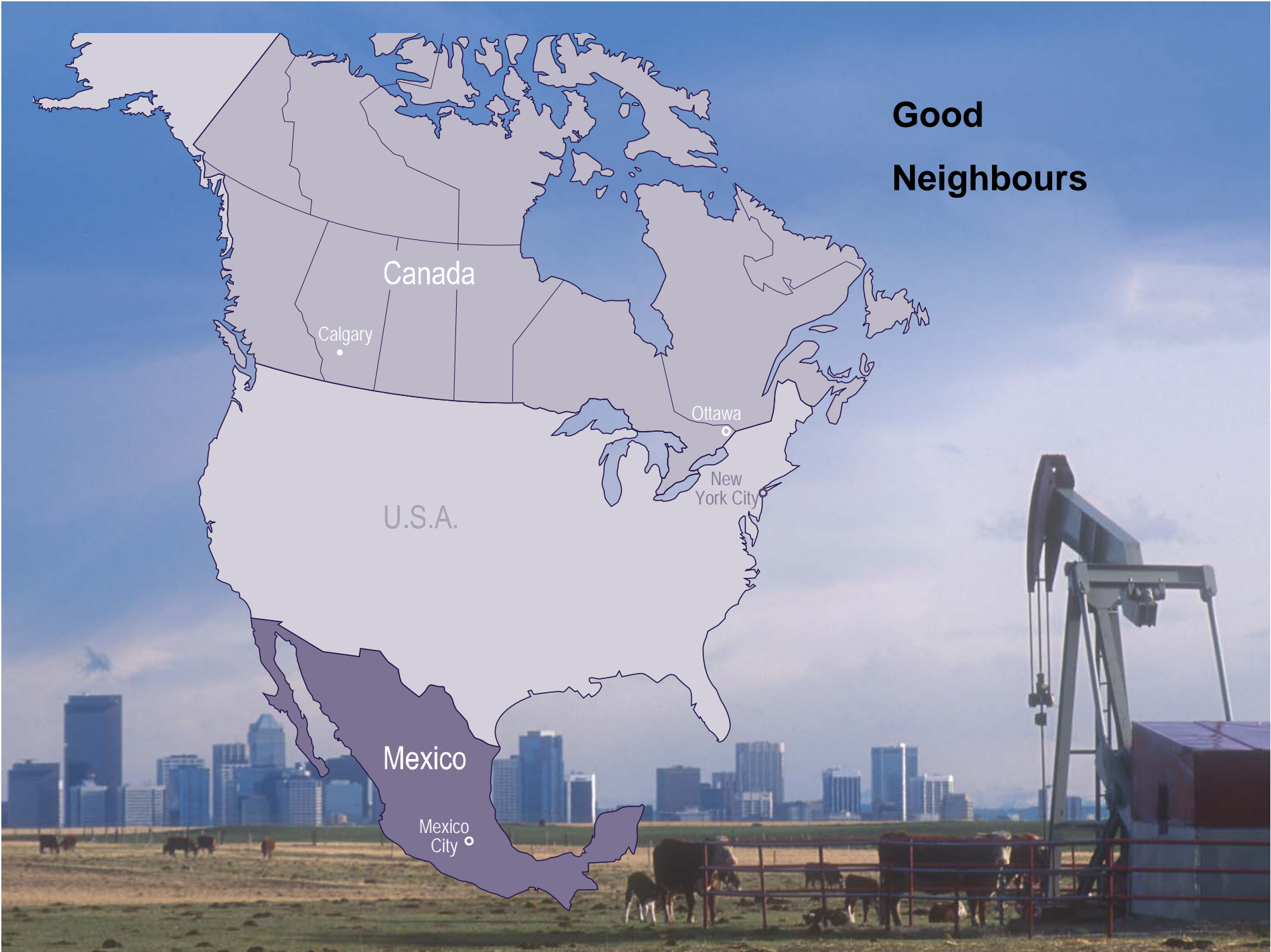
Arden Berg

Chairman, CAMPUT

Canadian Association of Members of Public Utility Tribunals

Board Member, Alberta Energy and Utilities Board

**Good
Neighbours**



Canada

Calgary

Ottawa

New York City

U.S.A.

Mexico

Mexico City





ENERGY JURISDICTIONS IN CANADA

Federal:

- **Inter-provincial and international pipelines (but not inter-provincial electricity)**
- **Exports and imports**
- **International power lines**

Provincial/territorial:

- **Everything else, including inter-provincial electricity lines and trade**



UTILITY RESTRUCTURING

- **No federal involvement in restructuring**
- **Electrical utilities: ownership varies - Crown (government), municipal, investor owned**
- **Natural gas investor owned**
- **Electricity Restructuring:**
 - **Alberta and Ontario primarily**
 - **Like USA, varying views of restructuring**



CANADIAN ENERGY

Oil and Natural Gas:

- **Canada #1 energy supplier to USA**
- **US Needs: Natural gas 15% - Oil 10%**
- **Alberta produces 73% of Canada's oil & gas**
 - Alberta: provides 8% US crude (60% of AB production)
+ 12% gas (50% of AB production)

Electricity Major Exporters to USA:

- **British Columbia, Manitoba, and Québec**



RECENT ENERGY DEVELOPMENTS

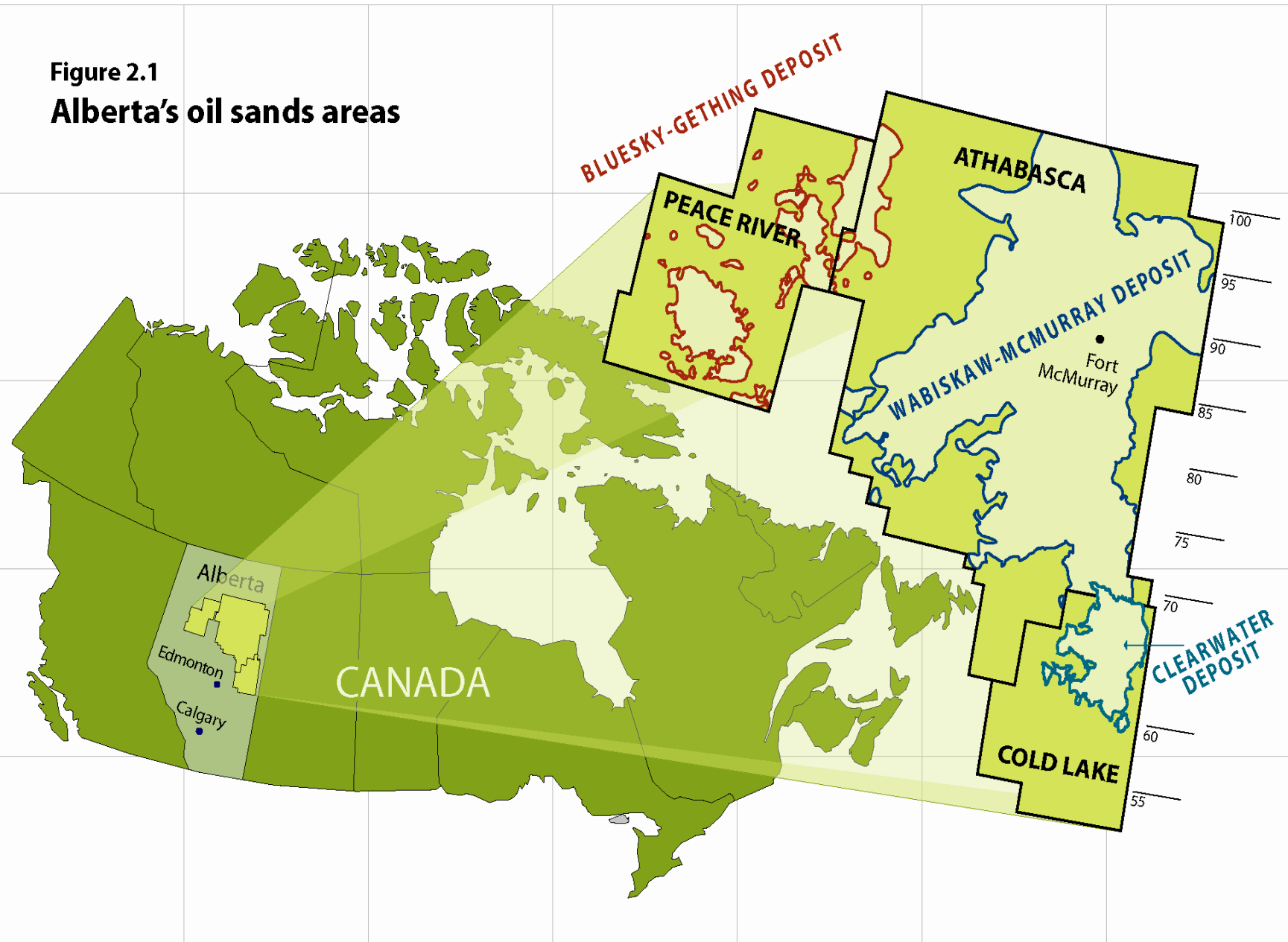
Oil Sands – large growing supplies:

- Very large reserves - 173 Billion bbls (2nd Saudi)
- 1.25 MMBPD (+18%/2005) to 2.8 MMBPD (2016) vs. conventional 0.54 MMBPD

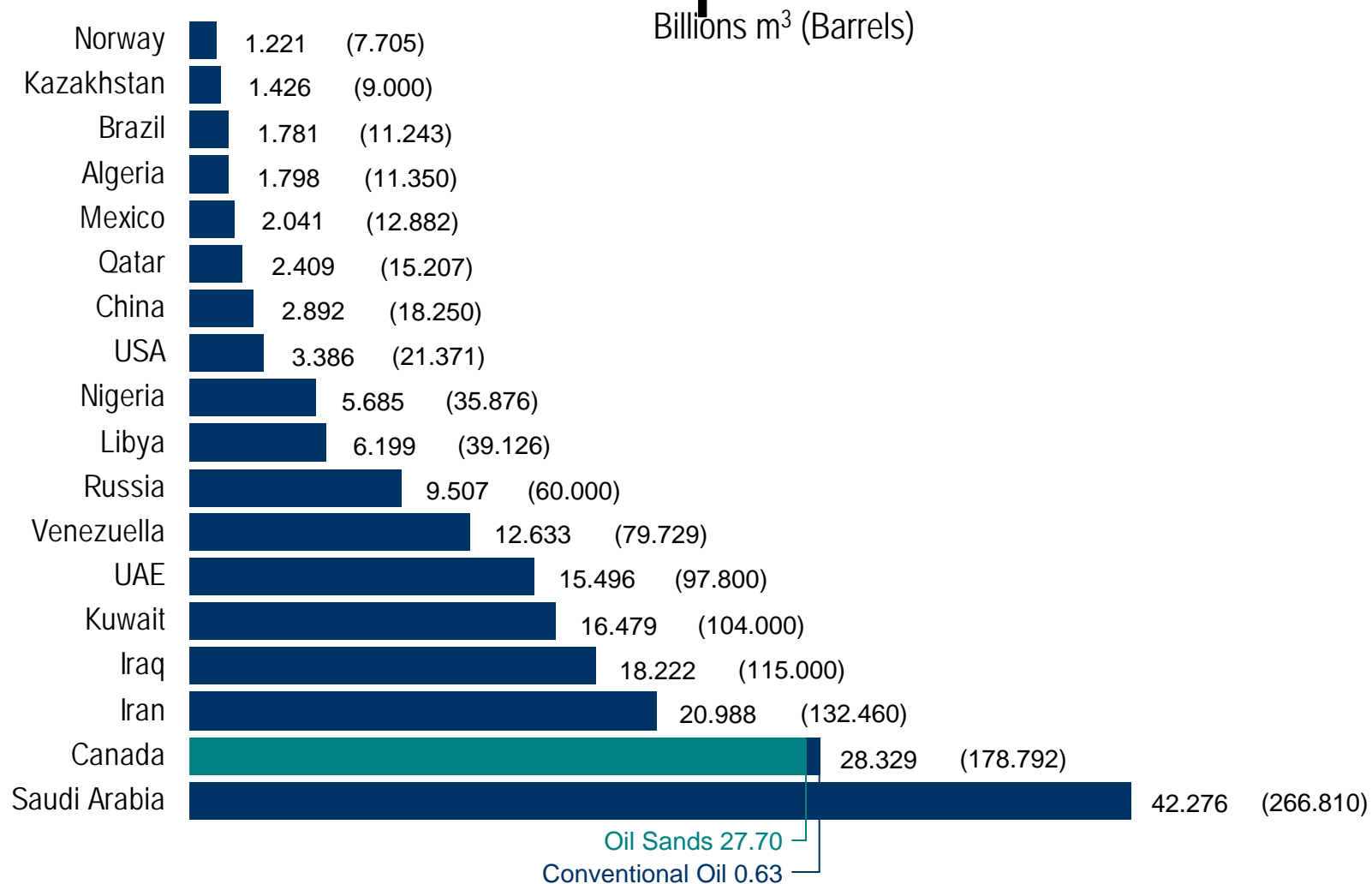
Natural Gas:

- LNG imports – facilities applications
- Northern gas – current proceedings underway
- Incr. Alberta oil sands use – exports? CBM?

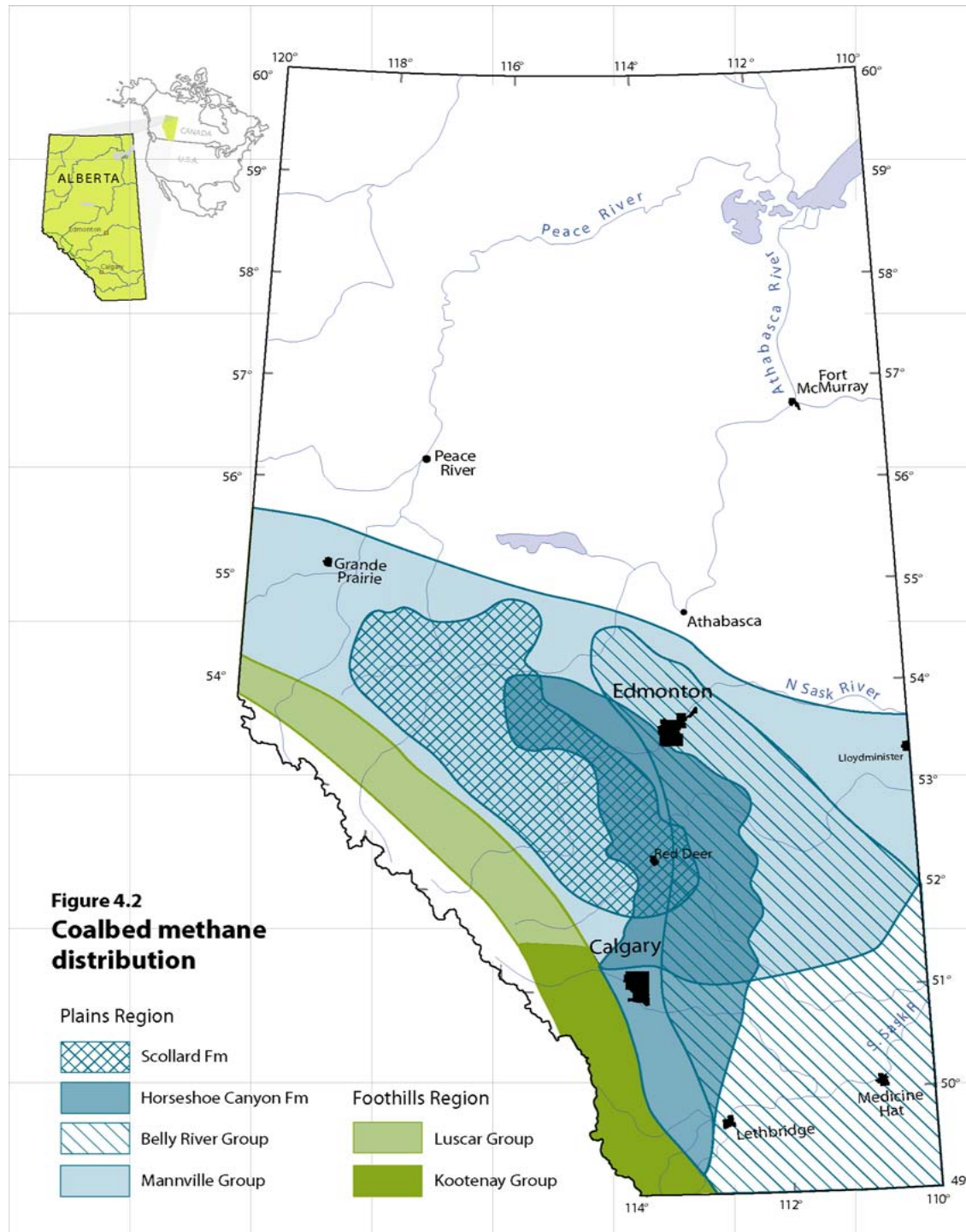
Figure 2.1
Alberta's oil sands areas



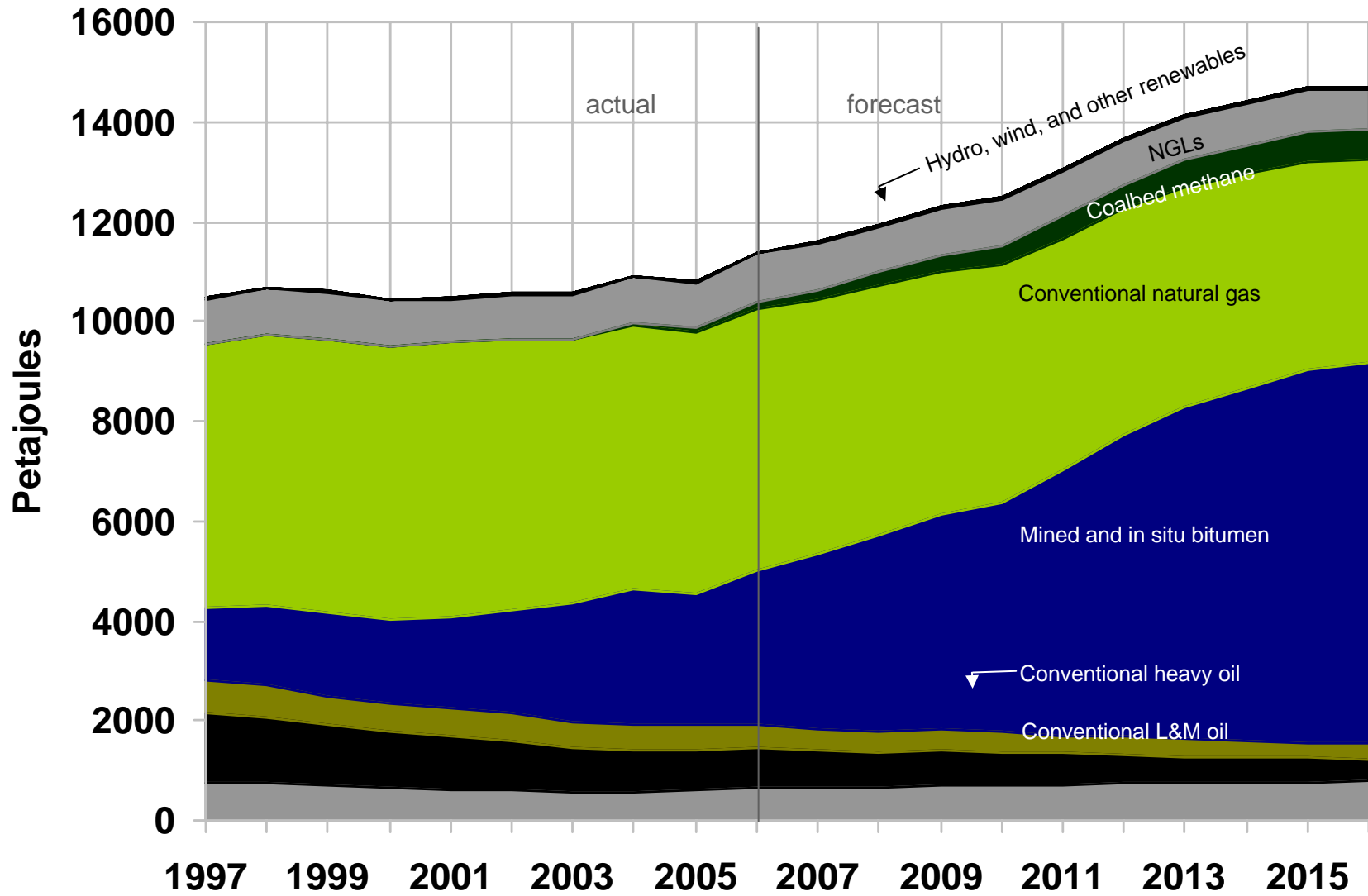
World Oil Reserves Top 18 Comparison



Source: Oil and Gas Journal, December 2005



EUB Report ST-98 Fig 1. Total energy production in Alberta



Oil Sands



400 ton trucks – Largest Made



Oil Sands Trucks on Site Roads



Oil Sands - Intensive Processing



Mineable Oil Sands



In Situ Oil Sands Development

horizontal wells, steam injection

A photograph of an industrial facility for in situ oil sands development. The scene features a series of large, dark metal wellheads or valves arranged in a row on a gravel surface. Each wellhead is connected to a network of pipes, some of which are wrapped in white insulation. In the background, there are yellow metal walkways and stairs, and a large green building. The sky is clear and blue.





Summary

- Value our relationship with NARUC
- Many common issues with USA
- Ongoing dialogue beneficial
- Energy – Canada major supplier



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