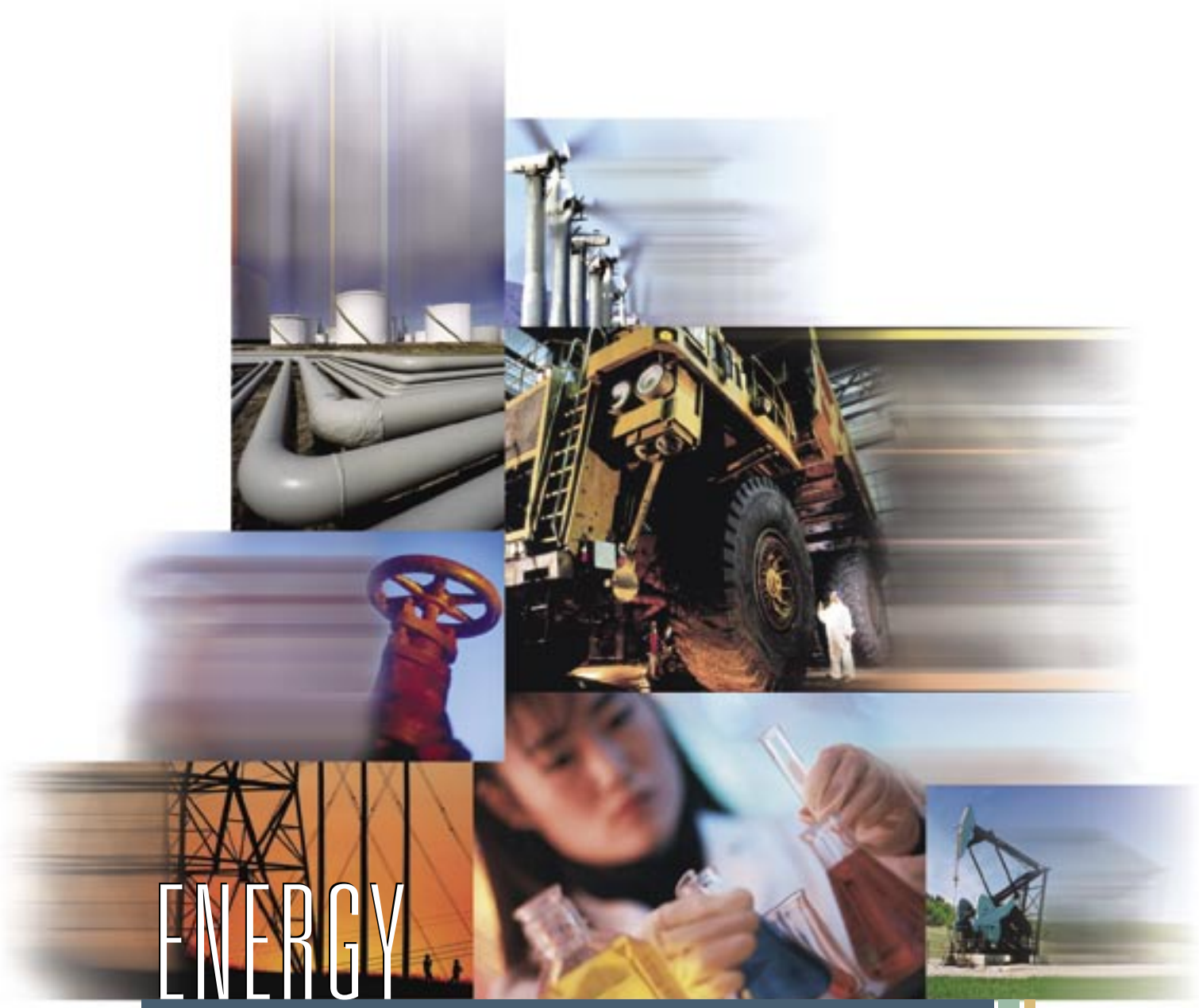


ENERGY

OIL • PIPELINES • MINERALS • OIL SANDS • ELECTRICITY • NATURAL GAS • PETROCHEMICALS

Alberta's Energy Industry Overview

Alberta
ENERGY

Oil Sands and Conventional Oil

Crude Oil Reserves (2003)

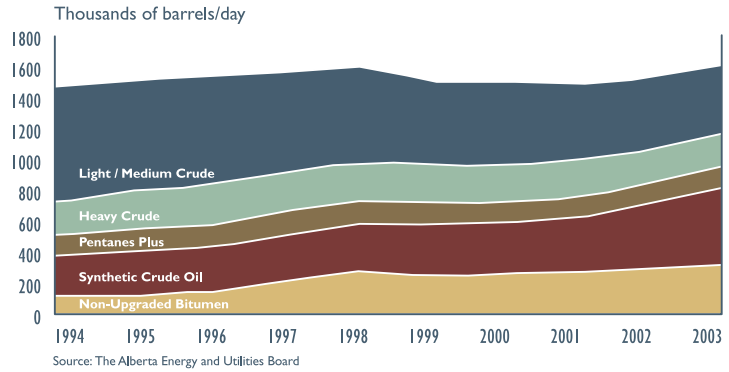
(Billion Barrels)	Oil Sands*	Conventional
Initial Volume In-Place	1,629.0	62.0
Initial Established	178.7	16.6
Cumulative Production	4.2	15.0
Remaining Established	174.5	1.6
Initial Ultimate Potential (recoverable)	314.6	19.7
Remaining Ultimate Potential	310.5	4.7

Source: The Alberta Energy and Utilities Board
Note: Individual items may not add up due to rounding.
* Oil sands consist of a mixture of sand, clay, water, and bitumen which, in its natural state, is not commercially recoverable through a well.

- In 2003, Alberta produced 629,000 barrels per day (bbl/d) of conventional light, medium and heavy crude, plus an additional 142,000 bbl/d of pentanes plus used for blending with heavy crude oil and bitumen to facilitate its transportation through pipelines.
- The conventional oil resource is estimated to have approximately 1.6 billion barrels of remaining established reserves.
- Conventional crude oil production (not including oil sands and pentanes plus) represented 38.6 per cent of Alberta's total crude oil and equivalent production and 25.5 per cent of Canada's total crude oil and equivalent production.
- With an effective and competitive royalty regime, and advancing technology, Alberta's oil sands offer an attractive energy investment opportunity.
- Alberta's oil sands reserve is considered to be one of the largest in the world, containing 1.6 trillion barrels of bitumen initially in place. Of this total, 174.5 billion barrels are considered to be remaining established reserves, recoverable using current technology under present and anticipated economic conditions. To date, about 2 per cent of the initial established resource has been produced.
- In 2003, total crude bitumen production in Alberta averaged 964,000 bbl/d.
- Of the total crude bitumen production in 2003, 858,000 bbl/d was marketable oil sands production, consisting of marketable bitumen and upgraded synthetic crude oil. This represented 52.7 per cent of Alberta's – and 34.8 per cent of Canada's – total crude oil and equivalent production. It is anticipated that in 2005, Alberta's oil sands production may account for 50 percent of Canada's crude output and 10 percent of North America's output.
- According to the Canadian Association of Petroleum Producers (CAPP), industry investment in Alberta's conventional oil and gas sector in 2003 was an estimated $15 billion, with an additional estimated $5.5 billion in oil sands investment.
- Disposition of Alberta's total crude oil and equivalent production in 2003 was approximately:

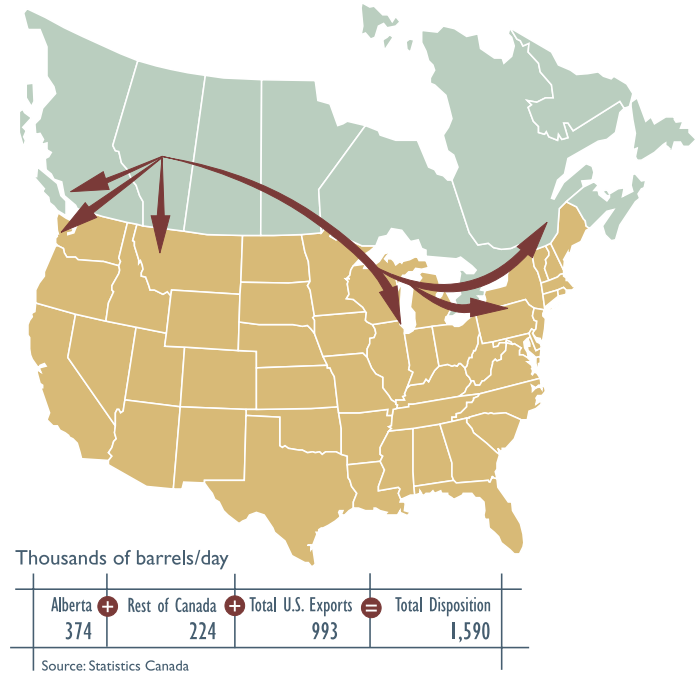
  62 per cent to the United States
  24 per cent within Alberta
  14 per cent to the rest of Canada

Total Liquid Petroleum Production



Source: The Alberta Energy and Utilities Board

Disposition of Crude Oil (2003)



Source: Statistics Canada

Note: Individual items may not add up due to rounding. Crude oil production is not equal to the disposition of crude oil and equivalent due to storage and shrinkage.

Natural Gas

- Alberta has a large natural gas resource base, with an estimated remaining 84 trillion cubic feet (Tcf) of ultimately recoverable conventional natural gas. This does not include Alberta's non-conventional natural gas resource potential.
- In 2003, Alberta produced 4.97 Tcf of marketable natural gas.
- Alberta's non-conventional natural gas resource includes natural gas in coal and tight gas.
- Alberta's natural gas in coal resource is estimated to contain from 100 to 500 Tcf of natural gas. The recoverable amount is not yet determined, but could give Alberta an important position in the development of additional gas supplies over the next 20 years.
- Alberta is an established gas market hub, which can support and benefit from northern gas development. We have streamlined approval processes, an efficient transmission and storage system, a highly skilled workforce, and processing and marketing infrastructure already in place.
- The proposed Mackenzie Valley pipeline could result in an additional 1.2 – 1.9 Bcf/d being shipped into Alberta and on to markets.
- Alberta is also a hub for natural gas liquids, such as ethane and butane, with an extensive network of transmission, storage, processing and marketing infrastructure.
- The Alberta Hub is a network of pipelines and infrastructure that delivers up to 17 billion cubic feet per day (Bcf/d) of Alberta and Western Canada Sedimentary Basin (WCSB) natural gas to U.S. and domestic markets.
- Located in Alberta, the Natural Gas Exchange (NGX) is the exchange where the AECO price is traded and, since 1994, has been one of the most efficient high volume natural gas clearinghouses in the North American energy industry.
- Proposed pipelines from Alaska could result in an additional 4.5 – 6.0 Bcf/d being shipped into Alberta and on to markets.
- Disposition of Alberta's natural gas production in 2003 was approximately:

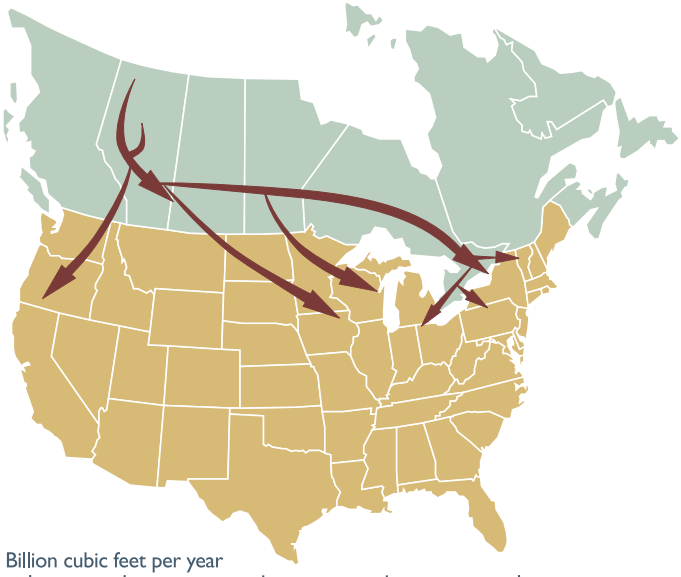
  62 per cent to the United States
  24 per cent to the rest of Canada
  14 per cent within Alberta

Natural Gas Reserves (2003)

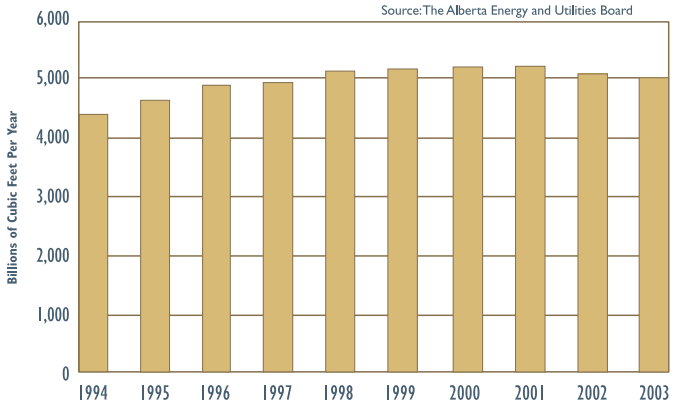
Conventional Natural Gas	Trillions of Cubic Feet
Initial Volume In-Place	261.0
Initial Established	156.2
Cumulative Production	116.0
Remaining Established	39.8
Yet to be Established	44.2
Initial Ultimate Potential (recoverable)	200.0
Remaining Ultimate Potential	84.0

Source: The Alberta Energy and Utilities Board

Disposition of Natural Gas (2003)



Marketable Natural Gas Production



Note: Disposition is based on sales and will not equal marketable production. Disposition does not necessarily reflect the point of final consumption.

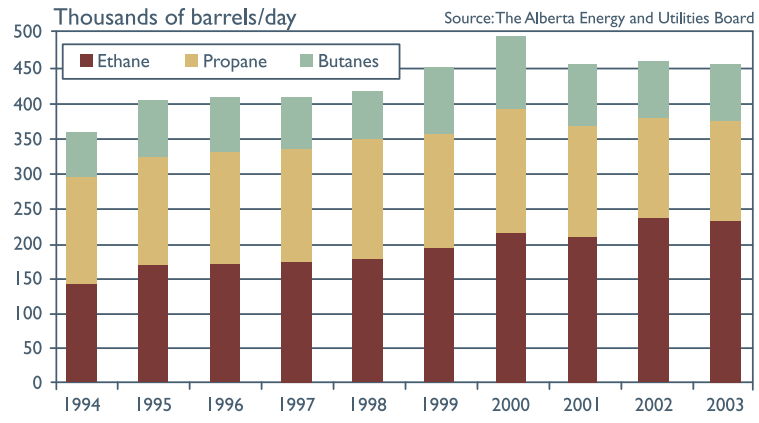
Petrochemicals

- A world-class petrochemical industry has developed in Alberta.
- The principal business relates to the value-added upgrading of our natural resources, particularly ethane, into ethylene, and ethylene derivatives. Alberta's petrochemical industry is comprised of:

  - ethylene and ethylene derivatives based primarily on ethane
  - ammonia and ammonia fertilizers

- Alberta's first propylene facility, opened in 2002, is capable of producing 170 million pounds of polymer-grade propylene, as well as recover natural gas liquids (NGLs) from off-gas, a by-product of the oil sands upgrading process. The recovered liquids and olefins are transported in batches, via pipeline, from the oil sands area to the propylene facility.
- In 2003, Alberta's petrochemical industry produced products valued at $7 billion.
- Alberta exported $3.6 billion worth of petrochemicals in 2003, with 83 per cent of this shipped directly to the U.S.
- Over $3.5 billion has been invested in Alberta's petrochemical industry in the last decade, resulting in increased production capacity of ethylene, polyethylene, ethylene glycol, linear alpha olefins and acetic acid.
- Alberta's ethylene capacity has nearly doubled as a result of recent expansions. The ethylene cracker at Joffre is the largest ethylene production facility in the world.
- Alberta is now exploring the significant potential of oil sands bitumen as a new source of feedstock for the petrochemical industry.

Production of Natural Gas Liquids



Coal and Minerals

- 45 per cent of coal mined in Canada in 2003 was from Alberta.
- Nine coal mine sites produced 28.2 million tonnes of marketable coal in 2003: 88 per cent subbituminous coal, 5 per cent bituminous metallurgical coal and 7 per cent bituminous thermal coal.
- In 2003, 2.9 million hectares were applied on for exploration of Crown metallic and industrial minerals.
- By year end, 10 million hectares were under active metallic and industrial mineral permits for exploration. Minerals of interest include diamonds, iron, uranium, and precious metals including gold.
- In 2003, $591,000 worth of mineral assessment work was filed with the Department.
- Limestone and salt continued to be the leading non-fuel minerals produced in Alberta. Small quantities of sandstone, shale and precious metals were also produced.

Electricity

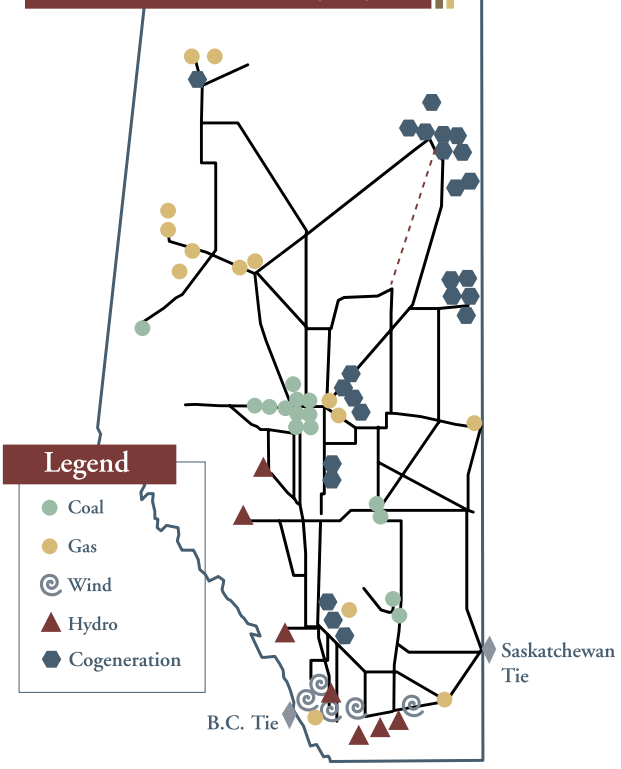
- Alberta's competitive electricity market has encouraged development of new generation. The marketplace is now better able to respond to growing demand by allowing anyone to build new generating capacity, not just utilities.
- Over 3,000 megawatts (MW) of new generation has been added to the Alberta power supply since 1998.
- At year-end 2003, installed generating capacity was 11,638 MW. Peak demand in 2003 was 8,967 MW, up from 8,570 MW in 2002.

Electricity Generation Sources

	1998	2003	2006** Outlook
Generating Capacity (MW)*			
Coal	5,636	5,519	5,911
Natural Gas (conventional)	1,201	1,667	1,669
Natural Gas (cogeneration)	802	3,226	3,568
Fuel Oil	6	8	8
Renewables (hydro, wind, biomass)	907	1,218	1,540
Total Installed Generating Capacity	**8,552**	**11,638**	**12,696**

* Compiled by the Department of Energy based on the Alberta Energy and Utilities Board, Independent System Operator (ISO) and industry information
** Outlook based on industry projects proposed or under development

Alberta's Electric System: Generation and Transmission (2003)

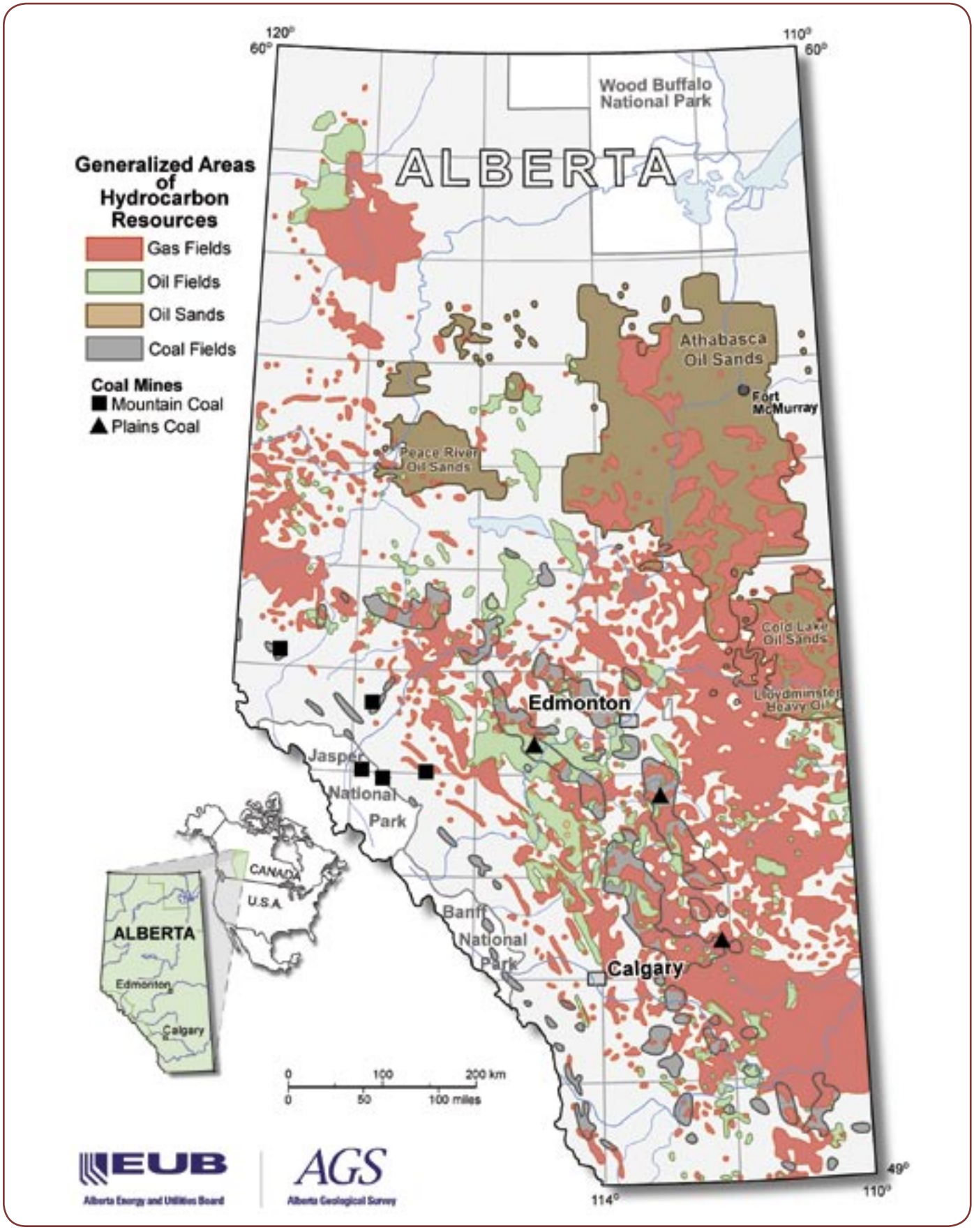


Energy Sector Highlights

- Alberta's mining and energy exports were valued at $39.6 billion in 2003 and accounted for 70 per cent of all Alberta's international exports in that year.
- According to the Canadian Association of Petroleum Producers (CAPP), in 2003, total estimated investment in Alberta's oil, gas and oil sands industries was $20.5 billion, or about 73 per cent of Canada's total estimated petroleum industry spending of $28 billion. Conventional oil, natural gas and oil sands investment made up about 49 per cent of Alberta's total capital spending in 2003.
- In 2003, over 121,000 people were directly employed in Alberta's energy sector. Directly and indirectly, Alberta's energy sector accounted for nearly 304,000 jobs, or about 18 per cent of Alberta's total workforce.*
- Alberta owns 81 per cent of its natural resources. Alberta's total non-renewable resource revenue for the fiscal year 2003/04 was $7.68 billion, or 30 per cent of all Government of Alberta revenues.
- Alberta's strong royalty revenue stream enables the province to maintain the "Alberta Advantage," of low personal and corporate income taxes, no sales tax and investment in priority areas, such as health, education and infrastructure.
- Approximately $80 billion of further investments in oil sands projects have been announced by industry for the period 2004-2020. As a result of continued oil sands investment, it is anticipated that Alberta's marketable oil sands production could reach 3 million bbl/d by 2020.
- In 2003, Alberta's pipeline infrastructure was made up of more than 332,000 kilometres of crude oil, natural gas, sour gas and other pipelines.

*Sources: Statistics Canada (direct energy sector and total employment in Alberta); Alberta Finance (indirect energy sector employment).

Hydrocarbon Resources



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For further information please visit www.energy.gov.ab.ca

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