

Petrochemicals

COAL · OIL · PIPELINES · MINERALS · OIL SANDS · ELECTRICITY · NATURAL GAS · PETROCHEMICALS



Alberta

Petrochemicals in Alberta



Alberta's petrochemical industry uses natural gas liquids, mainly ethane, for feedstock to produce ethylene. Ethylene is used to manufacture polyethylene for flexible packaging material, ethylene glycol and styrene. In turn, styrene is used for many consumer products such as expanded polystyrene cups and ethylene glycol is used for textiles and for antifreeze. The industry produces numerous other products including fertilizer.



Alberta – Canada's petrochemical leader

Alberta is Canada's leading producer of petrochemicals. Located primarily in Joffre and Fort Saskatchewan, petrochemical production is one of the largest manufacturing industries in the province. It features four ethane-cracking plants, including two of the world's largest, with combined annual capacity to produce 8.6 billion pounds of ethylene.

PRODUCTION CAPACITY: 8.6 billion pounds per year

VALUE: \$15.5 billion in products shipped

EXPORTS: \$7.1 billion

EMPLOYMENT: over 7,700 direct jobs

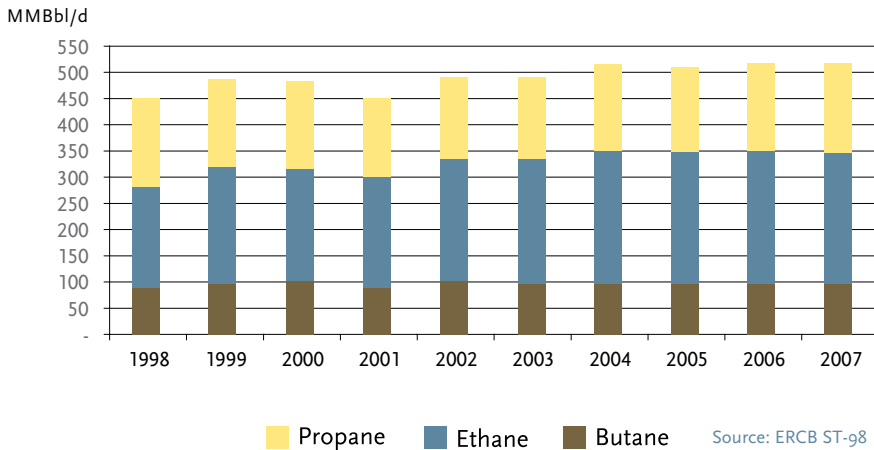
Petrochemicals are a valuable industry from Alberta's primarily resource-based economy. Petrochemicals are a refined product, taking natural resources and moving them up the value chain before exporting them. Annual petrochemical production is valued at approximately \$15 billion.

Alberta is committed to the ongoing success of the petrochemical industry as it is a model for value-added industry in the province, allowing Albertans to get the most out of the provinces resources – whether in investment capital, exported products or jobs.

As a result of approximately \$10 billion in capital investment since the 1970s, Alberta's petrochemical industry has substantially increased its production capacity for ethylene, polyethylene, ethylene glycol and linear olefins.

The viability of the Alberta petrochemical industry is built on access to a long-term secure supply of competitively priced natural gas feedstock and an ability to access global markets with competitively priced products.

Alberta Natural Gas Liquids Supply



Ethylene comprises the bulk of Alberta's petrochemical production, with up to 245,000 barrels of ethane feedstock being extracted from the province's natural gas supply daily. As natural gas production continues to decrease in the province, there will be a corresponding drop in ethane and other natural gas liquids. To offset this decrease, there are plans to extract ethane from off gases from bitumen upgrading. It is estimated that with new refining capacity up to 150,000 barrels of ethane could be produced from bitumen upgrading and used for petrochemical feedstock.

What is the HUTF?

The Hydrocarbon Upgrading Task Force (HUTF) was established in February 2004 to produce an action plan for achieving maximum value of Alberta's bitumen resources.

The task force consists of over 110 representatives from government and industry (including bitumen producers, refiners, and petrochemical stakeholders). Developing a business case to support an integrated eco-industrial complex for the upgrading of bitumen into transportation fuels and petrochemicals is a primary objective of the HUTF.

New opportunities for an established industry

As Alberta moves forward, more and more emphasis is placed on developing value-added opportunities in the province. The petrochemical industry makes valuable products used directly in the manufacture of thousands of consumer products.

To help increase petrochemical activity in the province, the government of Alberta introduced the Incremental Ethane Extraction Program. The program provides credits to petrochemical facilities that exceed baseline production levels.

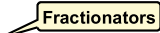
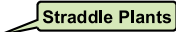

With the program in place, it is anticipated that new dollars will be invested by the petrochemical sector with expansions to current facilities and construction of new straddle plants for greater ethane extraction.


Opportunities are arising for a new feedstock for petrochemicals apart from natural gas. Innovative technologies have explored the option of integrating petrochemical facilities with bitumen upgraders, using off-gases as petrochemical feedstock.

Petrochemicals in Alberta


Ethane Extraction Facilities

Facility Type


-  Fractionators
-  Straddle Plants
-  Petrochemical Facilities

 Alberta Ethane Gathering System

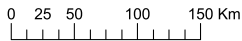
 Ethane Extraction Facilities

 Hydrography

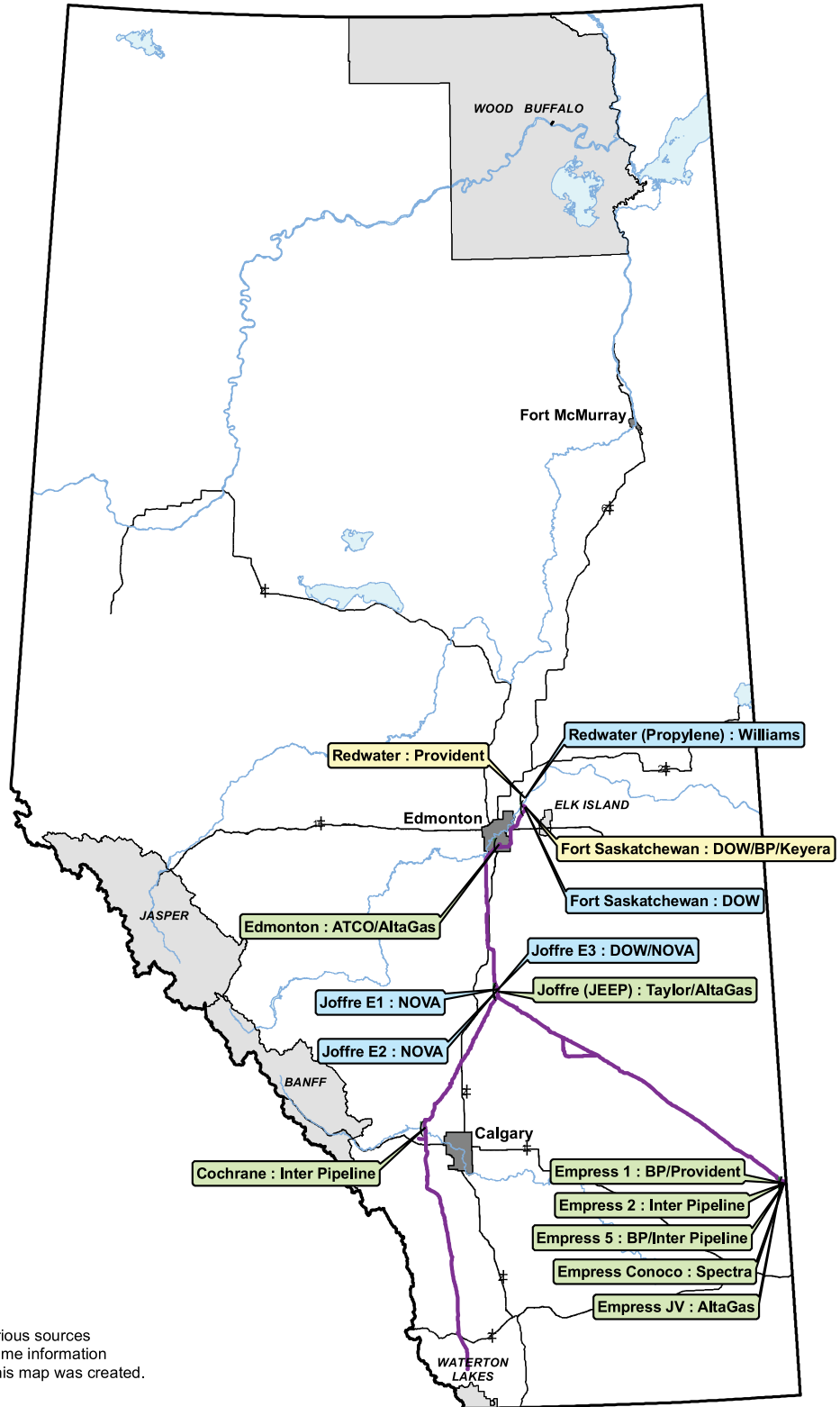
 Municipality

 Primary Highway

 National Park



Transverse Mercator Projection (10TM)
North American Datum 1983 (NAD83)



SOURCE INFORMATION:
Ethane Extraction Facilities - ERCB
Alberta Ethane Gathering System - ERCB
Base Data Provided by Spatial Data Warehouse Ltd.

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