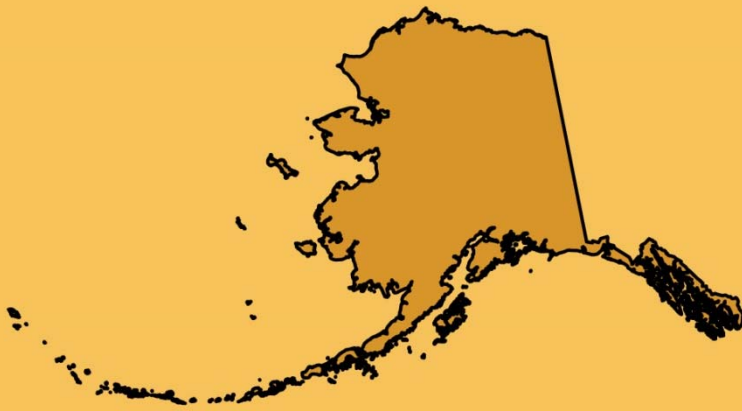




LET'S TALK ABOUT ALASKA

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People often bring up Alaska as a model that Alberta should consider emulating. Alaska produces crude oil from onshore and offshore projects. Due to their remote location and capital intensive nature, Alaska projects have been compared with Alberta's oil sands projects. However, oil produced from our two jurisdictions is delivered to different markets. And while there is some overlap between the companies that develop resources in our two jurisdictions, Alaska and Alberta are not meaningful competitors in any real way.

Geology and Geography

Alaska is the largest U.S. state by area, and is one-fifth the size of the lower 48 states combined. It is the only state with territory north of the Arctic Circle, and it has the highest mountains and longest coastline of any U.S. state. Alaska's winters are frequently severe, but its climate varies significantly from north to

south and from winter to summer. Large areas of Alaska remain uninhabited.

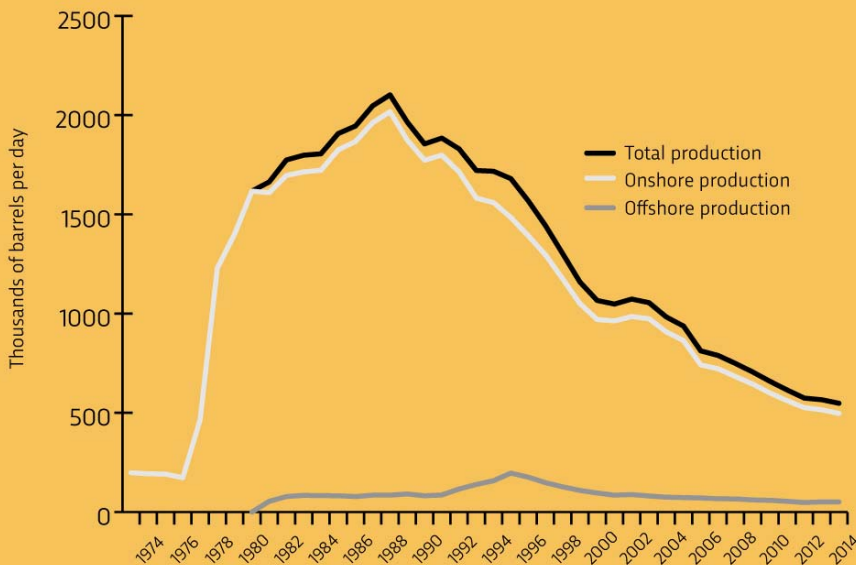
In recent years, Alaska has experienced warmer temperatures for longer periods of time during the year. This temperature change reduces the amount of time energy companies can explore for onshore oil, because ice roads and drilling pads can only be used during the coldest months of the year, when the frozen land is less damaged by equipment. On the other hand, warmer temperatures reduce floating ice packs, potentially making offshore oil exploration easier.

The oil and natural gas industry still dominates Alaska's economy, although production has significantly declined since oil and gas production peaked in 1988. Alaska's North Slope contains half a dozen of the 100 largest oil fields in the U.S, and one of the 100 largest natural gas fields in the U.S. Alaska's Prudhoe Bay field remains one of the largest oil fields in the U.S.

In 2014, Alaska produced 548,000 barrels per day (bpd) of crude oil, the vast majority of which was from onshore production (from approximately 1,800 producing wells with production rates averaging around 300 bpd per well). By comparison, in 2014, Alberta produced a total of 2.9 million bpd, of which 589,000 bpd was crude oil that came from around 30,000 wells (with production rates averaging 20 bpd per well or less, as some oil

can come from gas wells) and 2.1 million bpd was marketable oil sands production. These differences, which affect economics, make it challenging to meaningfully compare Alberta with Alaska on conventional oil wells or oil and gas totals. However, Alaska has often been suggested as a comparator and projects in Alaska can have some similarity to oil sands projects in Alberta.

Alaska Onshore Production



Since it is situated on the coast, Alaska can readily move its oil products to tidewater to deliver to its customers and markets around the world. This enables Alaska to receive the highest price available for its oil. (Alberta, on the other hand, is landlocked and we are essentially limited to selling our product to a single customer.)

Structure of the Industry

Like Alberta, Alaska is one sub-national jurisdiction that is part of a larger country. It has a stable democracy, the rule of law, and an open market economy. Also similar to Alberta, the energy industry in Alaska is comprised of private companies undertaking the actual exploration, production and sale of the resources. The government is not directly involved in developing the resources through any kind of state-controlled

energy company.

A significant portion of Alaska's oil and gas resources are federally owned (rather than State-owned). The U.S. federal government owns 67% of the onshore mineral rights, while the state government owns 27% of the onshore mineral rights. (In comparison, 81% of Alberta's oil and gas resources are owned by the "Crown", i.e. Albertans.) For offshore mineral rights, the U.S. federal government owns everything further than 3 nautical miles beyond the shore, while the state government controls everything within 3 nautical miles of the shore.

However, almost all Alaska oil and gas production occurs on state lands leased for exploration and development.

Alaska has five operating refineries, and it both imports and exports petroleum products. Two refineries in the Prudhoe Bay region supply fuel to crude oil drilling operations. Motor gasoline demand is primarily met by a refinery in Kenai, and aviation and heating fuels are produced there and in two other refineries, located at Valdez and near Fairbanks. Alaska is a major fueling stop for military aircraft and for commercial passenger and cargo flights between the United States and Asian countries. The state's largest refinery, near Fairbanks, was shut down in 2014, with the owner citing unfavorable economics.

Fiscal Framework

As the landowner, the Alaska government earns revenue from oil and gas activity through: upfront bonuses from auctioning mineral leases, annual rent charges, and royalty collected from oil and gas production. Alaska has the choice to take its royalty "in-kind" (i.e., receive its royalties in physical oil) or "in-value" (i.e., receive the monetary value for the oil). The decision whether to take its royalties in-kind or in-value is based on what is in the best interests of the State.

Alaska's oil royalty rate varies according to the terms of the lease agreement. It can range from 5% to 60% but is most often 12.5%. Some leases receive royalty rate reductions for new discoveries or economic considerations. Royalties are paid based on the value of the oil or gas removed from the lease, the volume removed, and the lease's royalty rate. Large lease holders have made special agreements with the Alaska government to allow certain expenses to be deducted from the sales value to calculate the royalties that are payable.

Since royalty rates are set according to the terms of the lease, the Alaska government will work with leaseholders to modify royalty provisions if necessary to make a defined project economic. Also, the Alaska government offers certain exploration incentives, including a 5% royalty for ten years on new pool discoveries in the Cook Inlet.

Alaska's state-level corporate income tax ranges from 0% to 9.4%. (The 9.4% rate applies to taxable income of \$222,000 and over.) Energy companies in Alaska also must pay 35% federal corporate income tax. (Companies in Alberta pay 12% provincial corporate tax and 15% federal corporate income tax.)

Use of Non-Renewable Resource Revenue

One area of interest to people is how Alaska manages its non-renewable resource revenue. Although how royalties are spent are not in the scope of the royalty review (only how they are collected), this is probably the biggest reason why people bring up Alaska, so it is worth noting.

Alaska has a large savings account, called the Alaska Permanent Fund. Created by constitutional amendment, at least 25% of monies raised from bonus bids, mineral lease rentals and royalties are to be placed in the Fund. The rules of the Fund require that the Fund's principal cannot be spent and may only be used for income-producing investments. Earnings from the Fund can be spent by the Alaska Legislature for any public purpose, including making payments to the public through the Permanent Fund Dividend. In 2015, the Alaska Permanent Fund was valued at \$51 billion (USD) and Alaskan residents received a dividend payment of \$2,072 (USD).

Alberta has made different choices with the taxes and royalties it raises from energy development. All tax revenues from energy activities are used in the operating budget — just like taxes from non-energy activities — to fund day-to-day services such as health and education. A portion of royalties has also been used to fund services such as health and education, and also been used to build infrastructure.

Sources: Alberta Energy; Alberta Energy Regulator; U.S. Energy Information Administration; U.S. Bureau of Land Management; Alaska Department of Natural Resources; Alaska Permanent Fund Corporation; Alaska Oil and Gas Association.