

AOGA Fact Sheet: Cook Inlet Oil & Gas Production

The oil and gas industry in Cook Inlet has made a substantial impact on the State of Alaska. The discovery of oil in the Swanson River field on the Kenai Peninsula in 1957 was a key driver in Alaska's successful bid for statehood just two years later, because the federal government saw the potential for oil and gas to fuel the economy of the new state. More than 55 years later, it is still doing just that.



Photo: Workers on Swanson River field 1957, AOGA

History of Cook Inlet oil and gas

After the discovery of oil in the late 1950s, Cook Inlet oil production peaked at 230,000 barrels per day (bpd) in 1970. For years, Southcentral Alaskans have used the oil and natural gas from Cook Inlet as the major source of heat and electricity. Natural gas from Cook Inlet provides heat to Anchorage, Kenai Peninsula, and Mat-Su area homes and businesses, and more than 80 percent of the electricity for communities from Homer to Talkeetna is generated from Cook Inlet natural gas.

After the peak in the 1970s, oil production steadily declined as the Cook Inlet fields began to age. By the early 2000s, production hovered around 30,000 bpd. It

was then believed that more than 90 percent of the region's recoverable oil reserves had already been produced.

For natural gas, the story was similar. Cook Inlet, which was an area that was once abundant in natural gas, had a bleak future. By 2009, communities in Southcentral Alaska were facing energy shortages and a potential crisis. Production from Cook Inlet declined to a level that was barely meeting consumer demand. Large industrial users slowed operations, while Agrium ceased operations altogether. Utility companies experienced difficulty in securing long-term supply contracts needed to stabilize rates. The region underwent a great deal of uncertainty while a variety of potential solutions—including importing liquefied natural gas or encouraging energy conservation—was discussed.

Cook Inlet's renewal

In 2010, the Alaska Legislature passed HB 280, also called the "Cook Inlet Recovery Act". This legislation expanded the capital credits available to Cook Inlet producers and cleared the way for the construction of a natural gas storage facility. As large companies moved out of Alaska, smaller, independent companies, like Hilcorp Alaska LLC, moved in and started operating. These companies drilled new wells and upgraded their newly acquired platforms.



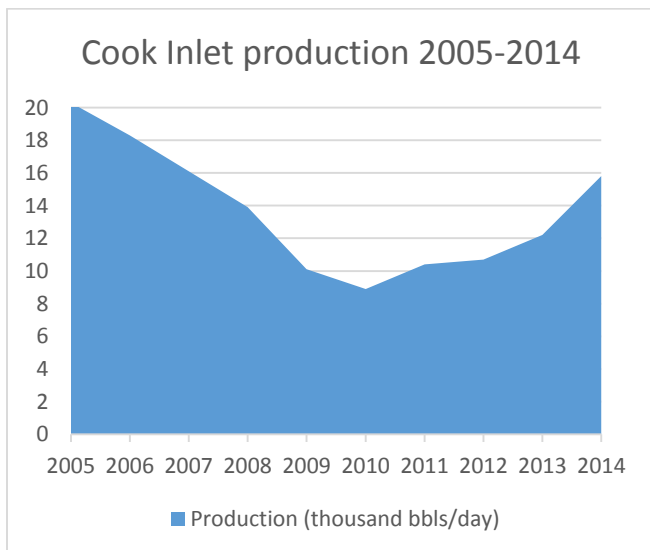
Photo: Hilcorp Alaska LLC

The increased activity lead to natural gas reserve additions and a steady increase in both oil and gas production. In 2014, Hilcorp performed 88 well work-

“Increases in production from mature fields are not possible without significant investment by the operators”

- Oil and Gas Division Director Bill Barron, Aug. 2014

overs and drilled 22 new wells. Since 2010, players in the Cook Inlet have drilled 75 new oil and gas wells. Additionally, a new gas fields have also been discovered. Expanded gas storage in the Cook Inlet natural gas storage facility has helped stabilize production. All told, Cook Inlet oil production has increased by 80 percent since the revitalization effort began.



Source: Alaska Dept. of Revenue Fall 2014 RSB

Cook Inlet oil and gas provides not only energy to Southcentral Alaska, but is also a powerful economic engine for the region. A 2014 study by McDowell Group estimates that the economic impact of the oil and gas industry on the Kenai Peninsula is an annual average of 6,000 jobs and \$430 million in total wages, which accounts for one-quarter (25%) of jobs in the borough. Additionally, eight of the top ten property tax payers in the Kenai Peninsula Borough are oil and gas companies.

One uncertainty facing the industry in the Cook Inlet is the expiration of some of the current tax credits in 2016. Elimination of the alternative credits for exploration

could mean a cooling of investment and a slow-down of industry activity.

Cook Inlet Natural Gas Storage Alaska (CINGSA)

In an effort to stabilize production and supply, the Alaska Legislature authorized the framework for a natural gas storage facility in Cook Inlet. The Cook Inlet Natural Gas Storage Alaska, or CINGSA, is Alaska’s first commercial underground storage facility that can be filled when production is high, and drawn down when peak commercial energy demands hit. CINGSA was developed to ensure that consumers would have adequate supplies of gas available throughout the year.

In July 2011, four utilities- ENSTAR, Chugach Electric, Municipal Light and Power, and Homer Electric- signed twenty-year firm storage contracts. Construction on five horizontal wells were completed in December 2011, and the first gas injections took place in April of 2012. CINGSA has a storage capacity of 11 billion cubic feet (bcf) of gas, with future expansion capabilities of 17 bcf. Up to 150 million cubic feet of gas per day can be injected or withdrawn from the storage reservoir. First gas withdrawals were made from CINGSA in peak winter demand of November 2012, and the steady balance of supply and demand has provided reliability to the utilities serving Southcentral Alaska since. Additionally, the storage facility encourages additional natural gas development and production from Cook Inlet by providing a secured long-term customer base.

Refining in Cook Inlet

The Cook Inlet is home to one of three active refineries in the state. Tesoro Alaska’s Kenai refinery produces



Photo credit: Tesoro

gasoline and gasoline blendstocks, jet fuel, diesel fuel and heavy fuel oils, propane, and asphalt. The refinery

can process up to 72,000 bpd and employs 225 full-time workers. Jet fuel, gasoline, and diesel are transported to the Port of Anchorage and the Anchorage International Airport through a 69-mile, 48,000 bpd common-carrier pipeline. Crude oil is delivered by double-hulled tankers through Cook Inlet, and by pipeline from both Cook Inlet and the Kenai Peninsula. The refinery also supplies Tesoro's network of gas station throughout Alaska.

In 2014, the Alaska Legislature passed legislation that approved the contract between the State of Alaska and Tesoro to extend the purchase of 15,000 bpd of royalty oil from the Nikiski refinery through January 30, 2016.

Industry regulations and environmental protection

A commitment to safe and environmentally friendly drilling has led to a long history of safe operations in Cook Inlet. Development in Cook Inlet has coexisted along other industries, including commercial and sport fishing, tourism, and marine transportation—without incident—since discovery of oil in the basin. New regulations and additional research has further ensured that development and environmental protection can co-exist. The industry upholds the highest regulatory standards to minimize impact on marine life, including protected species such as beluga whales, Stellar eiders, and sea otters. Another independent oil and gas explorer, Apache Corporation, serves as a superb example of



Photo credit: Reuters

managing conflict avoidance with local wildlife. Similar to other companies operating in the area, Apache works carefully to minimize impact on Cook Inlet beluga whales and all other marine animals. Apache employs Protected Species Observers, who work with seismic operators throughout operations to observe, power down or shut down operations if marine mammals are in designated safety zones, and halt all activity until the seismic area is clear of marine mammals. Additionally, Apache has

collaborated with student researchers from Alaska Pacific University to map locations of beluga whale, gray whales, porpoise, sea lions and harbor seals.

As for environmental protections, safeguards have proved effective in keeping Cook Inlet pristine over the years. Alaska's Division of Oil and Gas stated in their 2005 best interest findings that "data from several specific sites in Cook Inlet have not indicated water quality effects from oil and gas development."

Cook Inlet Quick Facts

Platforms: 16

Operators: 8

Oil and gas jobs: 2,820 direct and indirect jobs

Recoverable oil: 600 mbo

Recoverable gas: 19 tcf

FY14 Production: 15,800 bpd

What the future holds for Cook Inlet

A 2015 presentation by the State of Alaska Department of Natural Resources confirmed significant additional potential in existing fields in Cook Inlet, in addition to previously undiscovered resources. The substantial increase in investment and economic growth on the Kenai Peninsula shows no signs of slowing down.

The Alaska Liquefied Natural Gas project, or AKLNG, is being considered. If advanced, it will be the largest single investment in Alaska history. Designed as a multi-faceted "mega project", AKLNG starts on the North Slope with a gas treatment plan, then moves natural gas from the North Slope to Cook Inlet through a large diameter pipeline to a liquefaction plant in Nikiski on the Kenai Peninsula. The AKLNG project has the potential to create 9,000-15,000 jobs during construction and approximately 1,000 long term jobs and billions in state revenue from taxes and royalties.



The Alaska Oil and Gas Association (AOGA) is professional trade association whose mission is to foster the long-term viability of the oil and gas industry for the benefit of all Alaskans.