

## FERC issues final EIS for Alaska project

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The Alaska North Slope natural gas project on March 6 joined a growing list of proposed U.S. LNG export ventures with a final federal environmental impact statement, though it's still a long way from reaching a construction decision.

The final EIS is an important achievement, coming 5 ½ years after the project prefiled with the Federal Energy Regulatory Commission, but multiple steps remain. Gov. Mike Dunleavy described it in a prepared statement as “a process still with significant hurdles.”

Under FERC rules, commissioners could vote in early June on the Alaska application to build and operate the project. The FERC order, if approved, would set a deadline to start work in several years, though the state could later request an extension.

The project is the third Alaska liquefied natural gas proposal to reach a final EIS with federal regulators in the past 42 years.

A California-utility led venture, Western LNG, in 1978 reached that threshold for its proposed LNG terminal in Nikiski to send Cook Inlet gas to California. And Yukon Pacific received a final EIS in 1995 for an LNG terminal in Valdez to export North Slope gas. Poor economics killed both projects.

Dunleavy has never favored a government agency leading the latest venture — which a state corporation took over in late 2016 after North Slope oil and gas producers declined to pursue the project — and he reinforced that in his March 6 statement: “(It) must be led by private enterprise.”

Amid an oversupply, global LNG prices are at record lows — down about half from a year ago and down two-thirds from two years ago — causing several project developers on North America's East, West, and Gulf coasts to slow-go multibillion-dollar investment decisions on new export terminals intended to meet anticipated demand growth later in the decade.

Several proposed LNG export terminals around the country are in holding patterns, lacking enough market interest, customers, or investor or partner commitments to make a decision.

The Alaska LNG project also still needs multiple state and federal permits and regulatory approvals, and has to acquire several hundred acres of land and move a few miles of state highway for the LNG plant and marine terminal in Nikiski.

The Alaska Gasline Development Corp. has asked the state Legislature for almost \$3.5 million for the fiscal year that starts July 1 to fund 15 full-time positions to continue working toward “successful equity and debt financing of the project” and “other major federal permits and authorizations.” That effort would include soliciting “investment from outside parties” needed to fund full front-end engineering and design. That work, known as FEED, is estimated to cost at least \$600 million and likely could be more.

The multi-volume EIS covers the entire Alaska project, including 62 miles of pipeline to carry gas from the Point Thomson field west to join with gas from the giant Prudhoe Bay field,

where a massive gas treatment plant would remove carbon dioxide and other impurities before sending the gas down 807 miles of 42-inch pipe to a liquefaction plant in Nikiski on the east side of Cook Inlet.

If built to full capacity, the project would produce 20 million tonnes per year of LNG, among the largest in the world.

In the environmental review, FERC staff rejected the Matanuska-Susitna Borough's argument that municipally owned property at Port MacKenzie would be a better site than Nikiski for the estimated \$20 billion LNG plant and marine terminal. The final EIS also rejected the city of Valdez's contention that its community would be preferable to Nikiski.

Both municipalities are intervenors in the FERC docket and could choose to challenge the EIS decision on alternative sites before the commission or in court. Environmental groups opposed to the project that filed as intervenors also could challenge a FERC decision.

"An alternative is considered reasonable if it meets the stated purpose of the project and is technically and economically feasible and practical," the EIS said. FERC staff determined neither Port MacKenzie nor Valdez "would offer a significant environmental advantage" over the applicant's preferred site at Nikiski.

The final report also determined that an alternative Cook Inlet crossing route to reach Nikiski — suggested by residents and property owners in the area where the pipeline would come ashore — was not preferable to the project's preference to make landfall near Boulder Point. The residents said the Boulder Point pipeline landing would damage wildlife habitat.

The final EIS included a statement of environmental impacts that is commonplace in the regulator's review of other proposed U.S. LNG terminals: "FERC staff concludes that approval of the project would result in a number of significant environmental impacts; however, the majority of impacts would be less than significant based on the impact avoidance, minimization, and mitigation measures proposed (by the applicant)."

The report explained: "Impacts on wildlife, including terrestrial wildlife, avian resources, marine mammals, fisheries, and federally listed threatened and endangered species, would result from the loss, alteration, or isolation of habitat; introduction or spread of invasive species; changes in migration patterns; direct injury or mortality; impediment to movement; noise; artificial lighting; and turbidity and sedimentation."

In particular, the EIS said: "We conclude that constructing the project would have significant impacts on permafrost due to granular fill placement, particularly for the mainline facilities ... resulting in substantial conversions of wetlands to uplands and from the long recovery time for forested wetlands."

The state's 10-year-old gas line development corporation took over the project in late 2016 and filed the application with FERC in April 2017. North Slope producers ExxonMobil, BP, and ConocoPhillips had decided not to spend the significant sums of money that would be required to continue with permitting and engineering of the \$40-billion-plus project.

The producers and the state have spent more than \$700 million on the project since first envisioned in 2012 with about one-third of the total coming from the Alaska treasury.

In addition to AGDC's proposals for construction and operations efforts to lessen the project's environmental damage, FERC staff included its own recommendations in the final EIS. "However, some of the adverse impacts would be significant even after the implementation of mitigation measures," the report said.

"With the implementation of various best management practices, AGDC's commitments, and our recommendations, most impacts on wildlife would be less than significant," the EIS said, "but significant adverse impacts on the caribou Central Arctic herd could occur, along with adverse effects on federally designated critical habitat and a number of federally listed threatened and endangered species."

Effects on the caribou "would likely be significant due to the timing of impacts during sensitive periods, permanent impacts on sensitive habitats, and the project location at the center of the herd's range," the final EIS said.

The report included a similar warning about threatened species and their habitat: "Project construction and operation is likely to adversely affect six federally listed species (spectacled eider, polar bear, bearded seal, Cook Inlet beluga whale, humpback whale, and ringed seal), and designated critical habitat for two species (polar bear and Cook Inlet beluga whale)."

The U.S. Department of Transportation Pipeline and Hazardous Material Safety Administration, Environmental Protection Agency, Army Corps of Engineers, Coast Guard, Bureau of Land Management, Fish and Wildlife Service, National Park Service and National Marine Fisheries Service participated as cooperating agencies in the environmental review and will use the report for their own regulatory decisions.

More than 35,000 acres of land would be affected during construction, with that area diminishing to about 8,500 acres during operation. "Permanent impacts would total about 16,069 acres, including those both in and outside the operational area," the EIS said.

"The project would result in significant long-term to permanent impacts on thaw-sensitive permafrost (about 6,218 acres), thaw-stable permafrost (about 3,499 acres), forest (about 12,440 acres), and wetlands (about 8,225 acres)."

Opponents of the project — and of fossil fuels in general — have pointed to the likelihood of damaging sensitive permafrost along the pipeline route. The EIS acknowledged the issue: "We conclude that constructing the project would have significant impacts on permafrost due to granular fill placement, particularly for the mainline facilities ... resulting in substantial conversions of wetlands to uplands and from the long recovery time for forested wetlands."

The main pipeline would cross 553 waterbodies with the Point Thomson line crossing an additional 106 waterbodies.

The review also looked at air quality: "Operational emissions from the aboveground facilities could exceed thresholds for nitrogen and sulfur deposition and visibility at nearby Class I and II protected areas (e.g., the Arctic National Wildlife Refuge) as designated under the Clean Air Act. Mitigation measures could be implemented by the state of Alaska during the air permitting phase that would reduce these impacts."

It also looked at the project's effects on subsistence users: "Project construction and operation have the potential to affect the subsistence practices of Native Alaska communities

due to reductions in resource abundance and availability, reduced access to harvest areas, and increased competition from non-local harvesters. Impacts would result from the loss or alteration of habitat and loss or displacement of wildlife.”

On the plus side, the EIS said, “The project would result in positive impacts on the state and local economies, but adverse impacts on housing, population, public services, and local businesses could occur in some areas during construction.”