

# Draft EIS says LNG project could have significant environmental impacts

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The proposed Alaska LNG project would damage some areas of permafrost and wetlands and could affect migrating caribou and six endangered or threatened wildlife species — referred to as “adverse impacts” — according to the federal draft environmental impact statement released June 28.

“The project would result in substantial impacts on permafrost, wetlands, forest, and caribou (Central Arctic herds). Because the other current or reasonably foreseeable projects in the study area would similarly affect these resources, we found that cumulative impacts on these resources would or could be significant,” the report said.

However, many of the effects could be reduced or eliminated if the right steps are taken during construction and operation to avoid, minimize, or repair the damage, the draft said.

“With the implementation of various best management practices and our recommendations, most impacts on wildlife would be less than significant, but adverse impacts on some species, including caribou (Central Arctic herds) and federally listed threatened and endangered species, would occur,” the draft environmental impact statement (EIS) said.

Not unexpected for a project of this size, the draft lists pluses and minuses in the same sentence: “The project would result in positive impacts on the state and local economies, but adverse impacts on housing, population, and public services could occur in some areas.”

The Federal Energy Regulatory Commission (FERC) is the lead on the environmental review of the state-sponsored \$43 billion project to pipe Alaska North Slope gas 807 miles to a natural gas liquefaction plant and marine terminal in Nikiski on the Kenai Peninsula. The review started when the Alaska Gasline Development Corp. (AGDC) applied in April 2017 for federal approval.

The draft EIS was prepared with the assistance of nine other federal regulatory agencies, including the U.S. Fish and Wildlife Service, National Park Service, Environmental Protection Agency, National Marine Fisheries Service, Army Corps of Engineers, and Bureau of Land Management.

## REPORT TOTALS THOUSANDS OF PAGES

The draft review totals almost 3,800 pages, which includes 28 appendices of detailed analysis, maps, and charts in the three-volume package. The table of contents with its accompanying lists of tables, figures, appendices, and acronyms is 40 pages on its own.

Public comments to FERC are due by Oct. 3. The agency will hold a series of public meetings in Alaska; the dates were not announced with the release of the draft EIS.

Allowing time for state and federal agency review, along with revisions to the draft, the commission’s schedule calls for release of the final EIS in March 2020. Under that timeline,

FERC would be ready to vote on AGDC's application in June 2020. Commission approval is required to build and operate a natural gas liquefaction plant.

Even with FERC approval, the project would still face the economic-viability test of lining up a gas supply, LNG customers, investors, and financing before the venture could reach an investment decision and start the estimated five-year construction timeline.

Much of the report covers wildlife 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)."

FERC requested that the project sponsor "initiate formal consultation with the U.S. Fish and Wildlife Service and National Marine Fisheries Service regarding project effects on federally listed species."

## **EIS REJECTS PORT MACKENZIE ALTERNATIVE**

In addition to reviewing effects on wildlife and their habitat, communities and their economies, the report considered alternatives to several parts of the Alaska LNG project. Federal law requires that an impact statement review economically feasible alternatives to determine the "least environmentally damaging practicable alternative," including the developer's preferred option.

"We generally consider an alternative to be preferable to a proposed action if the alternative meets the stated purpose of the project, is technically and economically feasible, and offers a significant environmental advantage over a proposed action," the FERC report explained.

The alternatives review to attract the most attention in Alaska has been the Matanuska-Susitna Borough's strong advocacy for its Port MacKenzie property across Knik Arm from Anchorage as a better location than Nikiski for the liquefaction plant and marine terminal. The draft EIS determined Nikiski is the better choice.

"Although the Port MacKenzie Alternative would be technically feasible, it would not allow the project to meet all its objectives," the report said. "Moreover, its environmental advantages are not sufficiently great to offset operational environmental impacts stemming from the increased vessel traffic in Upper Cook Inlet. Therefore, we conclude that it would not provide a significant environmental advantage over the proposed Nikiski site."

Risks to Cook Inlet beluga whales, listed as an endangered species, would be greater with the Port MacKenzie alternative, the report said. "These impacts would persist for the life of the project, as opposed to the short-term impact" from constructing the pipeline across Cook Inlet to reach the Nikiski site.

"The summer density of Cook Inlet beluga whales in Knik Arm is more than 300 times greater than the density offshore of Nikiski," the report said. "We estimate that there would be about an 80 percent higher probability of a whale strike from LNG carriers transiting to and from Port MacKenzie during operation."

In addition, the report noted, "the Port MacKenzie marine improvements would occur within Critical Habitat Area 1 for the federally listed Cook Inlet beluga whale," while work at the Nikiski site would occur in a less critical habitat area.

In sticking with the Nikiski site, the report also cited the heavier ice conditions of upper Cook Inlet compared to the Nikiski area. Another concern was dredging: “The need to maintain a deeper and wider channel across the Knik Arm Shoal suggests that more overall dredging would likely be required to operate at the Port MacKenzie Alternative site.”

The Matanuska-Susitna Borough filed last year as an intervenor in the FERC review, which gives it the legal ability to challenge decisions in the EIS.

## **REPORT LOOKS AT WORKER CAMPS, TOURISM IMPACTS**

In addition to considering environmental risks, the review analyzed the project’s economic impacts.

“Project construction would increase population due to worker influx, but impacts would be minor due to the use of closed construction camps,” the report said. However, jobseekers and others would be drawn to Alaska during the construction, and “these additional residents could create an added burden on local governments because they would increase the demand for local community services and facilities.”

Additional tax revenues during the construction period “in most cases would offset the increase in expenditures,” the report said.

But keeping much of the construction workforce in closed camps, while reducing effects on local communities and services, has a downside, the report said. “Workers living in the construction camps would have little opportunity to make purchases within the local economy; therefore, most of the non-resident worker earnings would be spent outside the state.”

The tourism industry could be affected as hopefuls coming to Alaska in search of construction work “could compete with tourists for temporary accommodations, such as hotel/motel rooms, campgrounds, and house/apartment rental units.” High occupancy rates could be good for business, the report said. “However, if tourists should be prevented from visiting these areas due to a lack of accommodations, other parts of the tourism industry could be adversely affected.”

The draft EIS also looked at the project’s effects on residents who depend on subsistence harvests. “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,” it said.

“Impacts would result from the loss or alteration of habitat and loss or displacement of wildlife,” the report said. “The extent of impacts would vary by community, but overall, the impacts would be less than significant.”

## **SOME IMPACTS TO WILDLIFE ‘WOULD BE SIGNIFICANT’**

The report frequently refers to the project’s impacts on wildlife habitat and the environment with the reminder that most effects could be reduced.

“We conclude that project construction and operation would result in temporary, long-term, and permanent impacts on the environment. Most impacts would not be significant or would be reduced to less than significant levels with the implementation of proposed or

recommended avoidance, minimization, and mitigation measures, but some impacts would be adverse and significant.”

The report included a substantial analysis of the project’s impacts on the state’s caribou population.

“Impacts on all herds, other than the Central Arctic herds, would be less than significant,” the report said. However, pipeline facilities would be constructed “at the center” of the Central Arctic herd’s range. “Three construction camps would be within this herd’s range, including one that would be in insect relief habitat. Since project facilities would be central within this herd’s range, the project could serve as a barrier to migration between habitat areas or movement within specialized habitats. Operational activities would result in a permanent disturbance to these habitats.”

Although the report determined that impacts on the herd would be significant, it qualified that statement: “We do not know if the impact would be temporary or long term, or to what extent, if any,” the gas treatment plant at Prudhoe Bay or the 62.5-mile pipeline from the Point Thomson gas field to Prudhoe Bay would affect caribou herd movements.

To confirm that the gas treatment plant and Point Thomson pipeline “are compatible with caribou use of the area and to address concerns expressed by local residents,” the report recommends:

- Following construction, AGDC should conduct seasonal monitoring for three years to track caribou herd movement and determine if the project is creating a barrier to caribou movement.
- At the end of the three years, “if it is clear based on the annual reports that the project has created a barrier to normal herd movement, AGDC should develop and file” for federal review “a plan to minimize or mitigate any identified issues with caribou movement related to the project.”

## **REPORT GIVES RECOMMENDATIONS, MORE HOMEWORK**

Multiple recommendations are scattered throughout the report for specific steps during construction and follow-up analysis after the work is done. The EIS also assigned additional homework before the final EIS, such as requesting that AGDC submit updates of its revegetation plan to restore disturbed soils and its plan to prevent construction equipment from bringing invasive species into specific areas.

There are 35 pages of recommendations at the end of the report to prevent, reduce or mitigate impacts during construction and/or operations. The recommendations cover a wide range of issues, such as:

- Before the public comment period closes on the draft EIS, regulators want AGDC to submit a revised plan of directional micro-tunneling to install the pipeline beneath the Middle Fork Koyukuk, Yukon, Tanana, Chulitna, and Deshka rivers, and the Parks Highway. The plan should provide additional details of “feasibility crossing studies and the potential impacts and mitigation specific to the selected crossing.”
- Also before the public comment period on the draft closes, AGDC shall file a summary of the “acreages of designated critical habitat for polar bear that would be affected by project facilities.” Acreage shall be listed “by the four categories of

critical habitat (feeding, no disturbance zone, barrier islands and denning habitat)” as defined by the Fish and Wildlife Service.

Protecting sensitive permafrost and wetlands are a major part of the EIS analysis.

“We conclude that constructing the project would have significant impacts on permafrost due to granular fill [gravel] placement, particularly for the mainline pipeline facilities. The project would have significant adverse impacts on wetlands from granular fill placement resulting in substantial conversions of wetlands to uplands.”

Between the Arctic Coastal Plain and the Alaska Range to the south, about 580 miles of the 807-mile-long pipeline would cross continuous or discontinuous permafrost terrain.

Construction work could degrade or thaw permafrost, affecting surface wetlands, soils and runoff, the report said. “Operation of the mainline pipeline could cause long-term changes to permafrost, affecting subsurface hydrologic connectivity, groundwater flow, greenhouse gas emissions, right-of-way integrity, and revegetation. Frost heave could cause bending strain in the pipe or disruption to surface drainage patterns.”

AGDC’s work plan “identifies construction, restoration, and mitigation measures specific to permafrost areas,” including:

- Selecting the most appropriate construction method based on permafrost type and topography.
- Working in thaw-sensitive permafrost during the winter only.
- Working from gravel or ice pads to provide insulation over the permafrost.
- Putting insulating material on slopes to control the rate of permafrost thawing and/or minimize degradation.

The report provided numbers: “The project would result in significant long-term to permanent impacts on thaw-sensitive permafrost (about 6,377 acres), thaw-stable permafrost (about 3,415 acres), and forest (about 12,474 acres); and convert about 4,162 acres of wetland to upland.”

Air quality and noise levels also would be affected by the project. “During the years of simultaneous construction, start-up, and operational activities at the liquefaction facilities (in Nikiski), as well as during flaring events, impacts on air quality could be significant.”

The report said the same for noise levels near the Nikiski facilities. “Operational noise associated with the liquefaction facilities at the two nearest noise sensitive areas would likely double due to facility operation, which would be considered a significant increase.”