

AGDC says Port MacKenzie ‘not feasible’ for LNG terminal

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Several months of additional review did not change the opinion of the state’s North Slope natural gas project development team that Nikiski is a better site than the Matanuska-Susitna Borough-promoted Port MacKenzie for a multibillion-dollar gas liquefaction plant and marine terminal.

The Federal Energy Regulatory Commission (FERC) had instructed the state team to conduct a more thorough analysis of the borough site on Knik Arm as an alternative to the project’s preferred choice of Nikiski, on the east side of Cook Inlet about 65 air miles southwest of Port MacKenzie. The analysis will be incorporated into FERC’s environmental impact statement for the proposed Alaska LNG project.

The Alaska Gasline Development Corp. (AGDC) responded to federal regulators July 13 that it would not be possible to build and operate the LNG plant and marine terminal at Port MacKenzie “without constraining either existing or planned uses of the complex, or of the proposed LNG facility and its marine terminal.”

The Alaska LNG project team in 2013, when it was led by North Slope oil and gas producers, selected an industrial area of Nikiski as the best location, a decision which the state stuck with for its 2017 application to FERC after the producers left the project. The producer-led team had acquired more than 600 acres of private land at the site — about two-thirds of the acreage required for construction of the LNG plant, dock, and freight landing facility.

The Matanuska-Susitna Borough in January 2018 filed a formal complaint and request with federal regulators, pressing for a better look at Port MacKenzie, which the municipality has long promoted for industrial development. The borough owns the port property.

STATE TEAM CITES BELUGA HABITAT, CURRENTS AND TIDE

“Significant issues have been identified which make the Port MacKenzie site not favorable over the proposed ... site in Nikiski,” AGDC said in its July 13 filing with FERC. Those include:

- Work restrictions during construction and terminal operations because of the site’s location within Cook Inlet’s most protected beluga whale critical habitat area. The upper Cook Inlet area provides foraging and calving habitat for the endangered species.
- Conflicts with other actual and proposed uses of the port, and the need to move the access road and proposed railroad extension away from the LNG plant site. “The area identified by the borough currently used for port operations is not feasible in conjunction with existing facility operations,” AGDC reported.
- Wind, current, and sea-ice conditions could hamper winter operations at the port site.

- The wider tidal range at Port MacKenzie — with an average difference between high and low tides of 26.2 feet, as opposed to Nikiski’s 17.7-foot average range — would reduce by 25 percent the opportunities for unloading construction barges, adding a full work season to the project, AGDC said.
- Twice the current dredging volume would be required to widen the shipping channel through the Knik Arm Shoal to allow safe two-way ship traffic through the area. Strong currents in the area necessitate a wide berth for ships to move safely in and out of the port, AGDC said. Even with the additional dredging and wider channel, LNG carriers still would be limited to crossing the shoal only at high tides, AGDC said.
- The longer travel distance for LNG carriers to reach Port MacKenzie would add 12 voyages per year, requiring an additional ship — and higher costs — to move the same volume of LNG as the shorter route to and from Nikiski. Reaching Port MacKenzie instead of Nikiski, however, would save 55 miles of pipeline, AGDC said.

Although Port MacKenzie offers an existing dock and barge landing, AGDC said the deep-water dock at the site is inadequate for berthing and loading LNG carriers, and would have to be demolished and replaced. In addition, the barge dock would be unable to accommodate the heavy demand of offloading construction materials, the state team said, requiring a new facility.

The Nikiski site also would require construction of a new deep-water dock for LNG carrier loading, and a roll-on/roll-off barge and freight dock for delivering plant modules and construction equipment. However, AGDC said, winter sea ice at Port MacKenzie is thicker and builds up in heavier concentrations than at Nikiski, requiring construction of “ice mitigation structures” — large concrete structures (95 feet across) set on the seabed and reaching to the surface — to protect the dock and LNG carriers from ice damage.

BOROUGH SAYS AGDC IS WRONG

The Matanuska-Susitna Borough does not accept AGDC’s analysis, writing to FERC on July 20 that the borough “has already identified several aspects of AGDC’s response with which it disagrees.” The borough did not provide any details in its one-page letter but said it “intends to file substantive comments to highlight the incorrect information.” It said it would provide the information by Sept. 1, just six months before FERC is scheduled to release its draft environmental impact statement (EIS) for the Alaska project on March 8, 2019.

In addition to reviewing a project’s effects on the environment and communities, a federal EIS is used to determine the “least environmentally damaging practicable alternative” for multiple decisions in project construction. As such, the Alaska LNG impact statement is required to consider not only the location of the LNG plant but also pipeline routing, river crossings, and other environmentally sensitive project decisions.

The proposed Alaska LNG project includes 62 miles of pipeline to move gas from the Point Thomson field west to a gas treatment plant at Prudhoe Bay, where gas from the two fields

would be cleaned before going into an 807-mile pipeline running through the middle of the state to Cook Inlet. The design capacity for the plant is 20 million tonnes of LNG per year – about 7 percent of total LNG worldwide trade last year of 293 million tonnes, according to the International Gas Union’s June 28 annual report.

AGDC met with borough representatives in February, May, and June during its review of Port MacKenzie. The state team analyzed two possible locations for the LNG plant on borough property: One on the waterfront, and an option almost 1.5 miles inland.

AGDC said the waterfront property “is not feasible in conjunction with existing facility operations” at the site. Because of federally required safety zones required around the plant, the state said, the LNG project would need to control even more property, displacing the proposed railroad extension to the waterfront and an access road.

And while the inland property would solve the problem of a buffer zone displacing other users, it would complicate the project by separating the liquefaction plant and its LNG storage tanks from the loading dock and would require a 1,400-foot-wide exclusive safety corridor between the plant and the dock.

The state team, in its filing with FERC, pointed to planned and proposed uses for the port area as possibly incompatible with construction or operation of the LNG terminal, including a five-year contract for loading timber at the port under a harvest contract and port lease the borough approved in April. AGDC has said it wants to start construction in 2020, though it is not scheduled to see a final EIS until December 2019, and lacks firm customers for the LNG, financing for the \$43 billion project, and binding contracts to buy gas from North Slope producers.

The state corporation told Alaska legislators July 11 that is spending about \$3 million a month on permitting, finance, commercial negotiations, and promotion with expenses to move closer to \$4 million a month next year.

AGDC’s July 13 filing also responded to several other questions and data requests from FERC.

AGDC WILL USE MODELING INSTEAD OF DRILLING CORE SAMPLES

Regulators had recommended the state team collect sediment cores from a sampling of 15 rivers and creeks that the 807-mile pipeline would cross to help in determining the environmental risks of open-cut trenching AGDC has proposed for waterbody crossings.

AGDC has balked at that recommendation. “To achieve the requisite core depth to match pipeline burial depth, such sampling would require the use of drilling equipment in the anadromous stream, and permitting requirements would likely place operation of the drilling equipment in the winter of 2018/2019,” the state team told federal regulators.

“To avoid such delays, transport of such equipment into remote sites, and impacts to spawning or juvenile fish,” AGDC said, the project team has decided to use terrain mapping and modeling, which includes data from more than 3,000 boreholes along or near the pipeline route.

“A final report detailing the methods, data inputs, results and application to other crossings will be prepared and submitted to FERC on or before Aug. 30,” AGDC said.

The state team also responded July 13 to several questions federal regulators had asked about how the pipeline and its compressor stations, LNG plant, and vessel traffic could affect air quality along the route, including in Cook Inlet. The approximately 250 LNG carrier calls per year at Nikiski would add about 50 percent to large-vessel traffic in the inlet, AGDC said. “The increase in vessel traffic that would occur due to the project is not expected to substantially increase regional haze levels in the Cook Inlet region or cause a violation” of air-quality standards.