

FERC approval gives Alaska LNG 10 years to start operations

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Federal authorization for the Alaska LNG project sets a 10-year deadline to start operating the gas pipeline and liquefaction plant, twice as much time as regulators have generally allowed for other U.S. liquefied natural gas export terminal developers to build their multibillion-dollar facilities.

But none of the other ventures approved by the Federal Energy Regulatory Commission include the Alaska project's 870 miles of pipeline — adding to the engineering and construction time — nor do they face the seasonal limitations of building in Alaska.

FERC approved the state-led project application on May 21.

The U.S. LNG development with the next-longest accompanying pipeline, the \$10 billion Jordan Cove Energy Project, proposed for Coos Bay, Oregon, was given five years to start moving gas when FERC approved the project in March. Jordan Cove, proposed by Calgary-based Pembina Pipeline, includes a 229-mile pipeline across the southern part of Oregon to deliver feed gas from the Western Rockies and Canada to the coastal LNG plant.

Regardless of FERC's requirement to start operations by 2026, opposition from the state of Oregon and tribal, environmental, fisheries, and landowner groups — along with a shortage of LNG customers, investors, and financing — is likely to push any start-up date past the five-year timeline, if the development even goes ahead.

Opponents of the LNG project in Coos Bay had sought a rehearing at FERC, which the commission denied the same day it authorized the Alaska project. Within a week opponents had filed two lawsuits in federal court against FERC's actions.

FERC CAN GRANT EXTENSIONS

Developers can, and often do, request extensions of the FERC deadline to start operations.

For example, the commission in 2016 authorized construction of Golden Pass LNG in Texas, a venture of ExxonMobil (30%) and Qatar Petroleum (70%), with export operations to start by 2021. The developer in 2019 asked for an extension to 2026, which FERC approved.

In Alaska, FERC in 1995 authorized the Yukon Pacific project to pipe North Slope gas 800 miles to an LNG plant proposed for Valdez. The economics of the \$18.4 billion project (1996 estimate) did not work out and the developer requested, and was granted, four extensions of three years each from FERC, with the last one expiring in 2010. Regulators in 2010 denied the company's request for a fifth extension and in 2011 the developer relinquished its federal rights of way.

In denying the request for another extension, FERC in 2010 said the Yukon Pacific project's environmental impact statement is "outdated and can no longer be used to support the authorization." In addition, an agency official wrote, "There have also been numerous

changes in regulatory requirements since 1995, from both an environmental and safety perspective, that must now be addressed.”

A quarter-century after Yukon Pacific won FERC approval, the Alaska LNG project faces similar economic problems in a challenging global market for the fuel.

The state-funded applicant, the legislatively created Alaska Gasline Development Corp., adopted a strategic plan in April to turn over the project lead — and spending — to private parties if the corporation can find anyone interested in taking on the development. The state has been paying almost all the bills for more than three years.

Any change in project ownership would have to go through FERC, though it’s unlikely that a transfer or addition of partners would encounter a regulatory burden.

The AGDC board of directors expects to review at its June meeting an update to the project’s 3-year-old construction estimate of \$43 billion. Under the board’s strategic plan, the corporation will sell off the project’s assets if no one steps up to take over as lead.

PROJECT ECONOMICS NOT A FEDERAL CONCERN

FERC’s review of an LNG project application considers the environmental impact and safety of the facilities, not the economics. The U.S. Department of Energy makes the decision whether export of the gas is in the public interest. It, too, does not look at a project’s economic viability.

In 2015, the Department of Energy granted export authority to the Alaska LNG Project LLC, a venture of North Slope oil and gas producers ExxonMobil, ConocoPhillips, and BP. The state is not a party to that company or the export authorization.

The Alaska LNG project started at FERC in September 2014 when the sponsors, which then included the three major North Slope producers along with the state, initiated the pre-filing process. After the producers left the development team in 2016, citing weak project economics, the state proceeded on its own and submitted the lengthy application to FERC in April 2017.

FERC issued the draft environmental impact statement in June 2019, and the final EIS in March 2020.

The 127-page May 21 commission authorization requires AGDC to provide additional information and — in standard approval language — obtain all authorizations required under federal law before construction may begin.

FERC ORDER INCLUDES CONDITIONS

Among the dozens of conditions in the FERC order are some specific to Alaska and many others that are routine:

- Before any site preparation, AGDC shall file an overall project schedule and procedures for controlling access to work areas during construction.
- Before any site preparation, the developer shall file a cost-sharing plan “for funding all specific security/emergency management costs that would be imposed on state and local agencies.”

- A team of environmental inspectors must be on site during construction — the number to be determined by FERC — to monitor compliance and establish an environmental complaint resolution process.
- Before starting construction, AGDC shall file a revised feasibility study for crossing the Deshka River, about 100 pipeline miles north of the LNG plant in Nikiski. The project team proposes to install the pipe by “micro-tunneling” for about 1,300 feet beneath the river and its banks. FERC wants to see updated site-specific geotechnical information from additional soil borings. If the study indicates a change is needed in the crossing site or crossing method, FERC approval will be required. The Deshka is one of five rivers where AGDC proposes micro-tunneling to route the pipeline beneath the waterway. During the EIS review, FERC asked frequent questions of the tunneling process and environmental safeguards.
- After construction of the Prudhoe Bay gas treatment plant and Point Thomson gas pipeline are complete, AGDC shall conduct seasonal monitoring for three years “to track caribou herd movement and determine if project infrastructure is creating a barrier to caribou movement,” and, if it is, propose to FERC steps to solve the problem.
- AGDC shall not begin any construction or establish temporary work areas until it “completes outstanding archaeological and architectural surveys,” and files plans “to avoid, reduce and/or mitigate effects on historic properties,” allowing time for state and federal historic preservation agencies to comment.

Should any intervenors in the Alaska LNG docket at FERC object to the authorization or its conditions, they may request a rehearing of the commission’s decision. Intervenors include the Center for Biological Diversity, Northern Alaska Environmental Center, Sierra Club, National Parks Conservation Association, Chickaloon Native Village Traditional Council, the city of Valdez, Matanuska-Susitna Borough, and Kenai Peninsula Borough.

After the rehearing is denied or completed, an intervenor can go to court to challenge FERC, as opponents are doing with the Oregon LNG project.

GREENHOUSE GAS EMISSIONS

One of the major complaints by national opponents of the Alaska project — same as with almost all U.S. LNG export terminals — is the lack of consideration for greenhouse gas emissions from consumption of the fuel at the receiving end. The commission rejected that challenge for the Alaska LNG project. “The end-use of the LNG is unknown and ... the commission does not have the authority over and need not address the effects of the anticipated export of the gas,” the FERC order said.

“The commission once again refuses to consider the consequences its actions have for climate change,” Commissioner Richard Glick, a frequent critic of LNG project approvals, wrote in a dissenting opinion.

“The commission steadfastly refuses to assess whether the impact of the project’s greenhouse gas (GHG) emissions on climate change is significant. ... That refusal to assess the significance of the project’s contribution to the harm caused by climate change is what allows the commission to perfunctorily conclude that the environmental impacts associated with the project are ‘acceptable,’” Glick wrote.

In a concurring opinion with the majority approval of Alaska LNG, Commissioner Bernard McNamee took exception with Glick's statements. "The commission has no reasoned basis to determine whether GHG emissions will have a significant effect on climate change nor the authority to establish its own basis for making such a determination," he wrote.

"Further, the commission is not positioned to unilaterally establish a standard for determining whether GHG emissions will significantly affect the environment when there is neither federal guidance nor an accepted scientific consensus on these matters," McNamee wrote.

Glick's objections also focused on the project's potential harm to wildlife. "The commission concludes that the project will result in several significant, and often permanent, adverse impacts on the environment," he wrote. "The project is expected to adversely affect six endangered species including polar bears, seals, and whales. In addition, even with mitigation measures, the project is expected to have a significant adverse impact on the Central Arctic Herd of caribou, permafrost, forest, and air quality in areas such as Denali National Park."

LONG LIST OF PROPOSED U.S. LNG PROJECTS

In his opening remarks at the start of the FERC meeting where the Alaska LNG project was authorized, Chair Neil Chatterjee made no mention of the debate over greenhouse gases. He said he was "pleased" that the commission was approving the project to commercialize North Slope gas for export and use in Alaska. "This is the 13th LNG project we've approved since I joined the commission," Chatterjee said. He has served as a commissioner since 2017.

Just one of those 13 projects is under construction. The U.S. has six LNG export terminals in operation with construction underway at two more, along with more than a dozen others at various stages of proposed or permitted development for the Gulf Coast.

The LNG market already was oversupplied last year due to weakened Asian demand growth, even before global shutdowns to reduce the spread of the COVID-19 pandemic cut deep into economic activity and fuel demand worldwide. Since then spot-market prices have crashed to record lows and several market-demand forecasts have changed significantly downward.

"We don't see any additional North American export capacity getting sanctioned in the next decade," Ross Wyeno, an LNG analyst at S&P Global Platts, said in a May 26 news report.

FERC TURNS AWAY VALDEZ, MAT-SU CHALLENGES

The loudest challenges to the project's EIS within Alaska came from the city of Valdez and the Matanuska-Susitna Borough, both of which promoted sites within their own municipality as preferable to building the LNG terminal in Nikiski. The project team selected Nikiski in 2013, when the North Slope producers were leading the effort.

The final EIS rejected the Valdez and Mat-Su Borough challenges, which FERC repeated in its order.

"The Port MacKenzie Alternative (in the Matanuska-Susitna Borough) would not provide a significant environmental advantage over the proposed Nikiski site," the authorization said,

citing more challenging ice conditions in the channel for LNG tankers serving Port MacKenzie and the greater risk to endangered beluga whales from marine traffic.

“With respect to the Anderson Bay site (Valdez), liquefaction facilities at this location would require extensive civil design work and terracing,” the FERC order said, referring to the massive earth-moving work required to create a flat, buildable site for the LNG plant.

“While the Anderson Bay Alternative would avoid impacts associated with construction of a pipeline across Cook Inlet (to Nikiski), development of the Anderson Bay liquefaction site would result in greater marine impacts” than building at Nikiski, FERC said in its order.

The commission also noted that safety zones around loaded LNG carriers moving through Valdez Narrows “would restrict other vessel traffic.” Valdez is home to the trans-Alaska oil pipeline shipping terminal, which generates substantial tanker traffic.

The commission also rejected an alternative pipeline crossing route in Cook Inlet, proposed by property owners in the vicinity of the project’s preferred pipeline landing site on the Kenai Peninsula. The property owners had argued for moving the pipeline landing into what they identified as a less sensitive habitat area.

WETLANDS AN ISSUE

Several federal agencies that cooperated with FERC on the environmental review raised concerns over the amount of wetlands that would be filled for construction and operation of the pipeline and its facilities.

After construction is finished, the project will permanently change 8,225 acres of wetlands, with 6,220 acres affected by granular fill such as gravel or crushed rock. AGDC proposes to leave fill material in place at multiple work sites, rather than scrape or dig up the fill to return the areas to wetlands.

“The conversion of wetlands to uplands through granular fill placement would affect adjacent wetlands by fragmenting them into smaller sections and changing natural drainage patterns,” the FERC order said. “Wetlands in the Arctic Coastal Plain and Arctic Foothills subdivisions are known to store large quantities of carbon, which provide carbon sequestration on a massive scale. Wetland loss from granular fill placement in these areas would reduce the capacity” to hold carbon out of the atmosphere.

“Compensatory mitigation would likely be required by the (U.S. Army) Corps of Engineers to offset the loss of wetland,” FERC said. That could include restoration, establishment of new wetlands, enhancement, or preservation, adding that AGDC is consulting with the Corps and other resource management agencies “to determine the appropriate form of mitigation offsets.”

Wetlands also came up in an April 10 letter from the U.S. Fish and Wildlife Service to FERC. The agency noted that AGDC does not plan to remove fill material from more than a third of the wetland acreage used as temporary work pads during pipeline construction.

“Given that the fill placed in these wetlands will not be removed, the impact to these wetlands is more accurately characterized as permanent than temporary,” the Fish and Wildlife Service letter said. “The natural functions of these wetlands, including wildlife habitat, would be permanently lost even when the work pads are no longer needed.”

Noting that “standard wetland mitigation practice includes reclaiming wetland functions when the purpose and need for working in the affected wetlands is no longer required,” the agency recommended that AGDC reconsider its plans to leave fill in place or “acknowledge the temporary work pads as permanent.”

The Fish and Wildlife Service letter also addressed “string bogs ... characterized by peat deposits, acidic waters and layers of thick sphagnum moss formed over thousands of years of wetland succession,” which “are very susceptible” to damage. Though the pipeline would cross less than one mile of string bogs in 19 separate locations, the letter said, “the proposed crossings would damage the peat substrate of the bogs, accumulated over thousands of years, resulting in permanent and irreversible impacts to string bog habitats.”

The letter further explained, “Since string bogs form over centuries and their restoration is not feasible, the service recommends avoiding the permanent loss of this unique wetland habitat by selecting an alternate pipeline alignment that avoids string bogs, or minimizing impacts to this wetland habitat by using vertical support members to elevate the pipeline.”

The FERC order did not address the issue.

In addition to wetlands, the project would affect permafrost. “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),” the final EIS said.

WILDLIFE HABITAT WOULD BE AFFECTED

The FERC order also cited habitat protection concerns: “Although the final EIS found that drawing definitive conclusions about the impact of the project on caribou movement is not possible at this time, it concluded that the project’s permanent impacts on sensitive habitats, along with the project location at the center of the Central Arctic Herd’s range, would contribute to significant impacts on the Central Arctic Herd.”

Federal agency review for the EIS determined that the project, from the North Slope to Cook Inlet, would “adversely affect six species (spectacled eider, polar bear, bearded seal, Cook Inlet beluga whale, humpback whale, and ringed seal),” FERC noted, and “is likely to adversely affect designated critical habitat for two species (polar bear and Cook Inlet beluga whale).”

Construction work, including operating rock pits and building temporary access roads, “would affect animal behavior by temporarily disturbing or displacing wildlife, fish, and marine life or obstructing their movement,” the order said.

In addition, FERC said, “Pipeline construction would increase external competition for subsistence resources from non-locals, including from project employees.”

The increased competition for subsistence resources important to local residents “would continue during (project) operation,” FERC said. “Each of these general impacts could adversely affect individual or community harvest rates.”

However, the final EIS concluded, “With the implementation of various best management practices, AGDC’s commitments, and our recommendations, most impacts on wildlife would be less than significant.”

In a letter to FERC more than three weeks before the commission approved the Alaska project on May 21, Chad Padgett, state director of the U.S. Bureau of Land Management,

expressed concern over the “limited consultation process” with tribes over historic preservation issues.

“Of particular concern to the BLM is the limited consultation process. ... FERC has indicated ... that tribes have been contacted, however, this does not constitute required consultation.” The required level of tribal consultation from FERC has “been largely absent from the process up to this point,” he said.

In a letter to FERC a few days before Padgett’s letter, State Historic Preservation Officer Judith Bittner, of the Alaska Department of Natural Resources, also expressed concern that consultation “for such a large and complex project” has been inadequate.

MORE EPA, FISH, and WILDLIFE CONCERNS

The Environmental Protection Agency raised its own issues with FERC a month before the commission vote. The EPA letter cited several concerns, including inadequate dust-control monitoring for the project.

“We have concerns that this assumption of 100 percent control (fugitive dust emissions during construction) may underestimate the actual emission of fugitive dust from project construction during the winter months, when the surface is dry,” wrote Andrew Baca, director of the Pacific Northwest regional administrator’s division. EPA recommended that the project’s fugitive-dust control plan be extended to year-round monitoring.

The Fish and Wildlife Service on April 10 also questioned plans for burying the pipeline beneath waterways, and AGDC’s plans for soil vegetation at the end of construction.

The main pipeline would cross 553 waterbodies over its 807-mile length, with the 62-mile Point Thomson line crossing an additional 106 waterbodies, according to FERC. The Fish and Wildlife Service questioned how deep the pipeline would be buried in floodplains and recommended deeper burial under waterways subject to meandering or erosion of the stream bottom.

Deeper burial “would allow the channel to migrate freely across the meander belt without exposing a shallow buried pipe, which would require potentially expensive long-term protection measures and potentially degrade fish and wildlife habitat,” the agency said.

The FERC order did not specifically address the Fish and Wildlife letter.

While the Fish and Wildlife Service commended AGDC “for setting revegetation goals that include site stability and restoration of wildlife habitat,” the agency also expressed concerns “regarding the ability to achieve timely and successful revegetation and site restoration without plans for salvaging the topsoil for a larger portion of the project footprint.”

Of particular concern, the agency said, are areas of permafrost or with a shorter growing season and areas with a thin topsoil layer.

“Once these soils are disturbed (removed, mixed with mineral soils/overburden, and then replaced), the natural recolonization process may take considerable time before there is sufficient plant cover to minimize or prevent thermal erosion, subsidence, and ponding,” the agency said.

AGDC’s revegetation plan indicates that seeds and fertilizer will be spread over the pipeline construction area “to enhance revegetation,” Fish and Wildlife said. “While soil

fertilization of a disturbed site may initially increase plant growth, once the nitrogen is absorbed, vegetation will die back and natural recovery may still take decades.”

To improve the outcome, the agency recommended the project increase its efforts to salvage and reapply topsoil “wherever practicable.”