ALASKA NATURAL GAS TRANSPORTATION PROJECTS
OFFICE OF THE FEDERAL COORDINATOR

Tall stack of authorizations await Alaska LNG project

The multibillion-dollar Alaska LNG project[1] aims not only to tap the North Slope's bounty of natural gas, pipe it to tidewater and superchill the vapors into a condensed liquid for export to Asia markets.

The project also aims to tap a bounty of public resources: land, wetlands, gravel, lakes and ponds, streams and rivers, possibly even the ocean itself. And to tap them, the project sponsors would need a stack of permits and authorizations from a variety of government agencies.

During construction and operations, the system's machinery, like any industrial activity, would create emissions that would alter air quality. Public soils and vegetation would be disturbed, at least temporarily. The project would cross paths with threatened and endangered species, and other fauna under public protection.

The project's sponsors cannot use the public's land, water and other resources without permission. It can't change the air quality or water quality without a public process finding that such changes would be acceptable, findings that likely would come with strings attached.

The project's pipeline can cross the Yukon, Tanana or Susitna rivers only after demonstrating this won't impair the navigability of those waterways.

The gas liquefaction plant cannot start production without a determination that it can be run safely.

The gas itself cannot be shipped away from the United States without consideration of whether the export would harm U.S. consumers.

Even the president, under a 1976 law, would have a special say on the export of North Slope gas, a unique feature of the Alaska project that doesn't exist for Lower 48 liquefied natural gas projects.

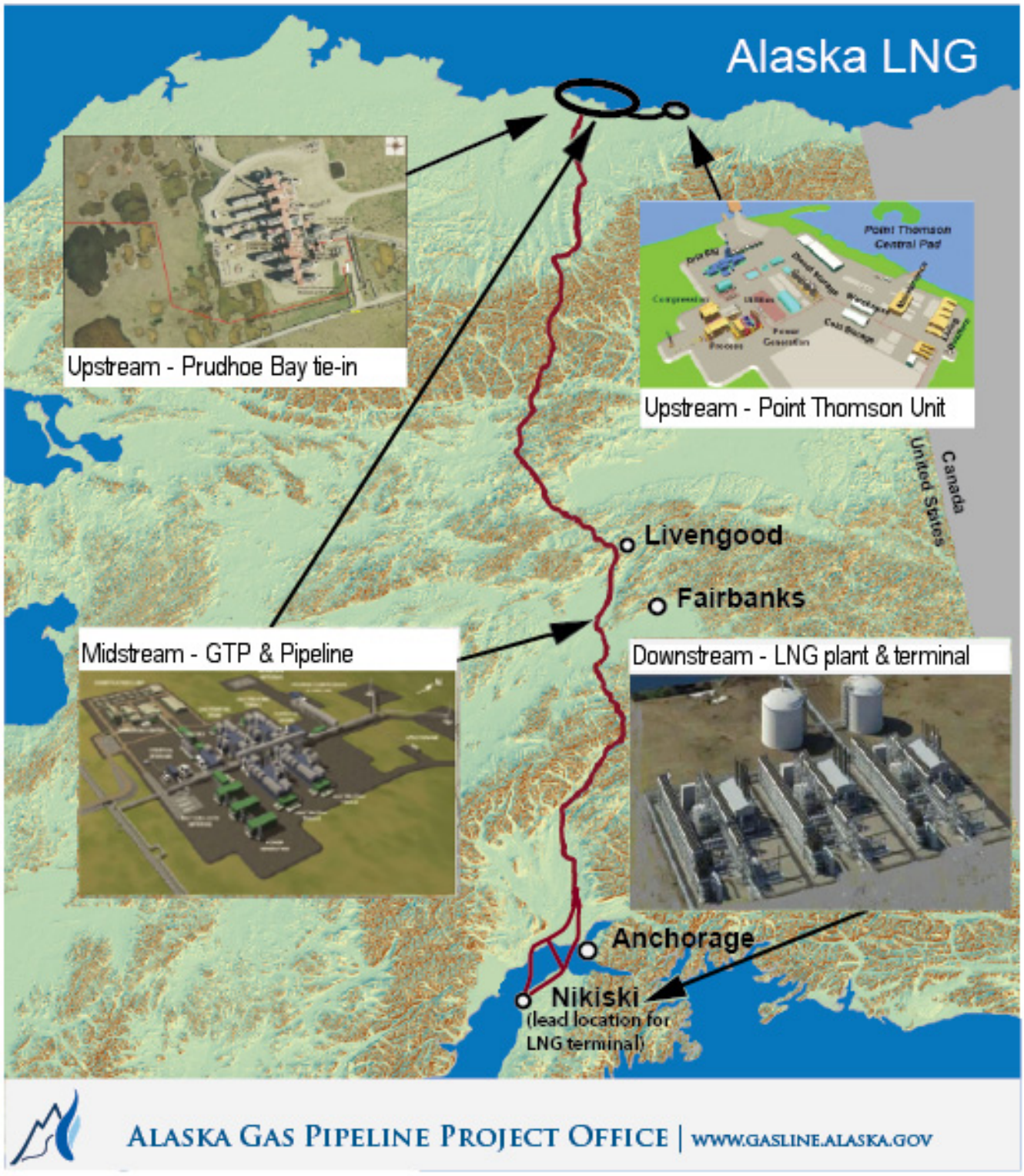
To say that the Alaska LNG project would need federal paperwork is to understate the matter, like saying the Pentagon is roomy or monsoon season is damp.

The sponsors know the task ahead to receive the authorizations needed for their project. And they have begun gathering the environmental data regulatory agencies will want to see.

PERMITS BEFORE CONSTRUCTION

More than a half dozen federal agencies would issue major authorizations for the Alaska LNG project before construction could begin. These include:

- Federal Energy Regulatory Commission — to authorize siting, construction and operation of the LNG plant and likely the 800-mile pipeline from the North Slope to the plant. FERC also would take the lead on a consolidated environmental impact statement researched and written on behalf of itself and other federal agencies.
- Bureau of Land Management — to grant use of federal land for the pipeline, construction camps, staging yards, gravel mining and water extraction.



Source: Alaska Gas Pipeline Project Office

The estimated $45 billion to $65 billion Alaska LNG project would involve integrating several major undertakings: Gas production from two North Slope fields, a gas treatment plant at Prudhoe Bay to remove impurities, an 800-mile buried pipeline, and an LNG plant and export terminal at Nikiski.

- U.S. Army Corps of Engineers — to issue dredge and fill permits pertaining to wetlands, rivers and offshore areas.
- Environmental Protection Agency — to permit disposal of sediment dredged from the Beaufort Sea if needed to create a deeper shipping channel for sealifts to deliver construction materials and equipment to the North Slope.
- Fish and Wildlife Service and National Marine Fisheries Services — to authorize isolated incidents of harm or death of marine mammals, endangered species or other protected animals.
- Pipeline and Hazardous Materials Safety Administration — to ensure the gas pipeline would be built and operated to federal safety standards.
- Coast Guard — to ensure any bridging of rivers would not impair the waterway's navigability, document the suitability of Cook Inlet to handle LNG tanker traffic, consult with the project sponsor on the LNG terminal's emergency response plan and approve the terminal's security plan.
- Department of Energy — to authorize gas exports.

Other federal agencies could lay their fingerprints on the project, too. For example, the Federal Communications Commission for radio communications, the Federal Aviation Administration for building or altering airstrips, Homeland Security for the vulnerability of facilities to attacks, or the Bureau of Indian Affairs for rights-of-way on any Alaska Native allotments the pipeline could cross.

State of Alaska agencies would have the lead on air, water and wastewater permits, under authority delegated from the EPA, as well as use of state land.

Federal agencies and the project sponsors also must consult with the Alaska Historic Preservation Office on any historic or archeological sites the project would encounter during construction.[2] Part of the project's field-season work in past years has been to identify such sites so the pipeline route and other land use can skirt them. Encountering them during construction could involve delays while preservation officers decipher a site's significance.

DÉJÀ VU, AND THEN SOME

Federal agencies have seen Alaska North Slope gas projects before. Over the years, quite a few of them have burst into headlines like supernovas, before eventually flaming out.

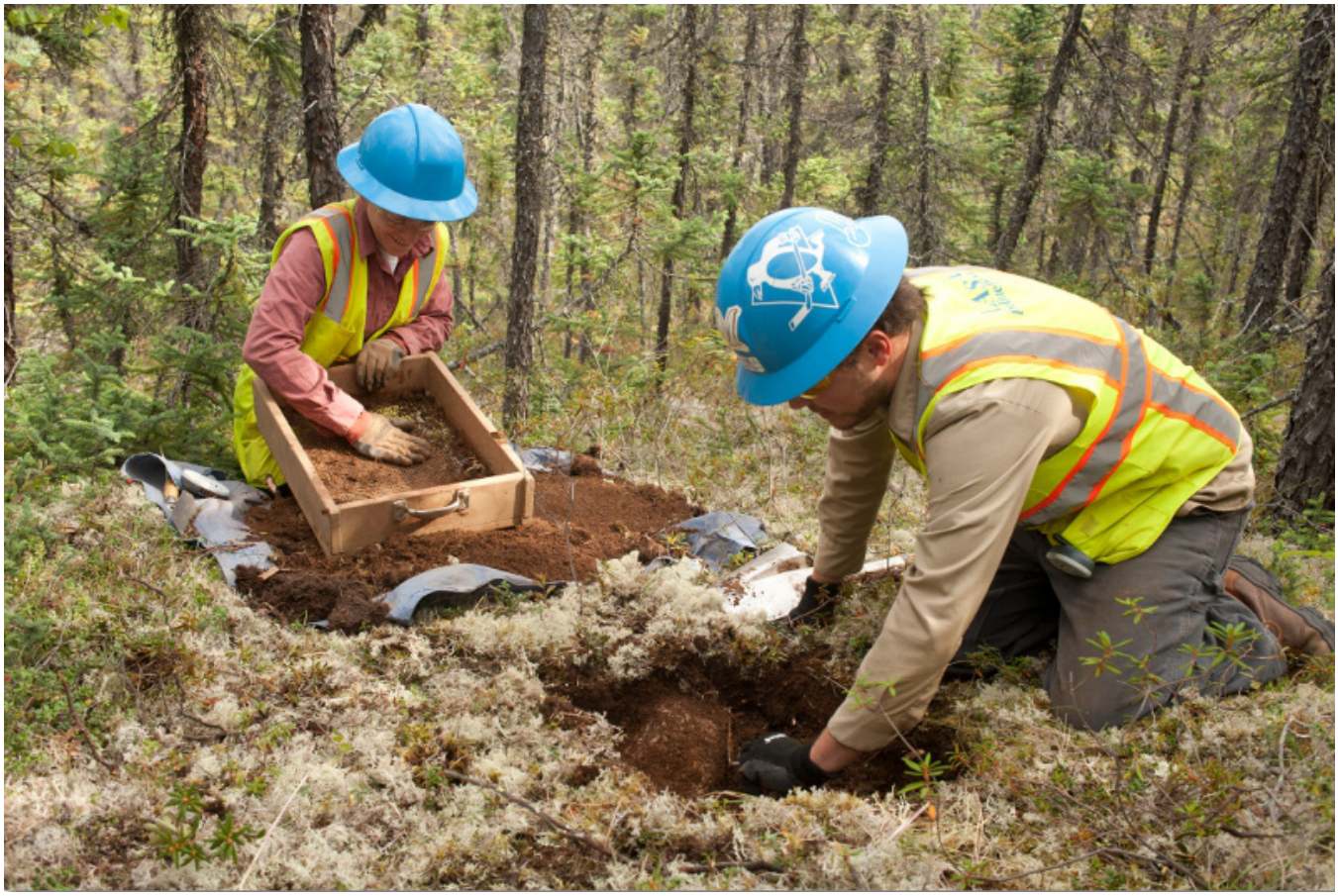
For the most recent proposal to pipe North Slope gas through Canada to North American consumers, about two dozen federal agencies had lined up for permitting work before the pipeline sponsors shelved the project in 2012.[3]

The Alaska LNG export project would engage many of these same agencies. A substantial portion of it is essentially identical to the project to serve North America: A huge plant at Prudhoe Bay to cleanse produced gas of impurities, and half of the pipeline route — as far as the Fairbanks area.

Alaska LNG proposes a $45 billion to $65 billion venture that would be one of the world's largest LNG projects.

The 800-mile pipeline would carry up to 3 billion to 3.5 billion cubic feet of natural gas per day. After Alaskans, the pipeline compressor stations and LNG plant at Nikiski consume some gas, the plant would have the capacity to make 17 million to 18 million metric tons a year of LNG, about 2.2 billion to 2.4 billion cubic feet of gas a day.

The sponsors are the main North Slope producers — ExxonMobil, ConocoPhillips and BP — as well as pipeline company TransCanada and the state of Alaska. (TransCanada and ExxonMobil sponsored the 2012-shelved pipeline to Canada. ConocoPhillips and BP also sponsored a project to move North Slope gas through Canada that couldn't pass the economics test and was dropped in 2011.) They are in the pre-front-end engineering and design phase, or pre-FEED, which is expected to be completed in late 2015 or 2016. If the project looks financially viable, next would be FEED of perhaps two years or so, when many of the pre-construction federal authorizations would be obtained. Construction could start toward the end of this decade if the project keeps progressing.



Source: Alaska LNG Project

In 2011, cultural and archeological resources crew members worked in Interior Alaska as part of field work for a North Slope gas pipeline project to Canada under consideration then by TransCanada and ExxonMobil.

Below is a brief guide to the federal agencies that would be involved with the major Alaska LNG authorizations.

FEDERAL ENERGY REGULATORY COMMISSION

This commission would do some of the heaviest lifting in overseeing the Alaska LNG project.

It would authorize the siting, construction and operation of the LNG plant and related facilities and take the lead in crafting the environmental impact statement that multiple agencies require for their authorizations.

It's likely that FERC would consider the 800-mile pipeline and the gas treatment plant at Prudhoe Bay as "related facilities" to the LNG plant in preparing a single environmental impact statement. The argument would be strong that these would exist primarily to feed gas to the LNG plant, making them integral to the plant's function. FERC won't consider and decide whether they're related facilities until the Alaska LNG sponsors ask the commission for permission to pursue the LNG project. FERC would have to interpret the legal definition of "LNG terminal," which was broadly written by Congress in a 2005 law.

If FERC declines the pipeline and treatment plant oversight, another federal agency or agencies with substantial jurisdiction, such as the Corps of Engineers or Bureau of Land Management, likely would lead separate environmental impact statement(s) for those pieces.

For the LNG plant, FERC would review design and engineering of the three big LNG production lines,

called trains, that chill incoming gas to minus 260 so that the vapors liquefy and condense; cryogenic piping and insulation; refrigerant tanks; LNG storage tanks; pumps; meters; boil-off-gas compressors; a pier for two tankers; utilities. That's just a sampling.

FERC would evaluate how construction could affect geology, soils, water and air quality, noise levels, wetlands, vegetation, wildlife, threatened or endangered species, essential fish habitat, land use and recreation, among other possibilities.

For the pipeline, gas treatment plant and other related facilities, the breadth of oversight would be just as vast. The environmental impact statement could cover temporary and permanent roads, bridges and water-body crossings, material sites, pipe-storage yards, contractor yards, worker camps, compressor and metering stations, control rooms, regulating stations, helipads, dredge channels, ocean -disposal sites, ice/snow pads, pipeline trenching — to name some.

FERC requires project sponsors to pre-file with the commission ahead of formally filing for authority to build an LNG plant. During the months-long pre-file period, the sponsor compiles specific baseline information on the project and the surrounding environment. The energy commission and other regulatory agencies can then verify and use that baseline information for the environmental-impact analysis. The sponsors compile this information in dense public documents called "resource reports."

For the unsuccessful North Slope-to-Canada gas pipeline project, the TransCanada-ExxonMobil team filed 11 draft resource reports in January 2012. They tallied about 4,500 pages. Much of this information likely can be used for the Alaska LNG project. More info will need to be gathered for other parts of the pipeline route and the LNG plant site.

The environmental analysis is a key stepping stone to getting FERC approval. When FERC approved construction of Cheniere Energy's Sabine Pass, La., LNG export plant in 2012, its 57-page order finding the project is "not inconsistent with the public interest" largely discussed the environment-impact analysis. That plant now is getting built, and Cheniere says it will make its first LNG in late 2015.

	Federal Energy Regulatory Commission
Oversight	Authorizes siting, construction, operation of LNG plant and related facilities, likely including 800-mile pipeline and Prudhoe Bay gas treatment plant; lead agency on environmental impact statement.
Key laws	Natural Gas Act of 1938; Energy Policy Act of 2005; National Environmental Policy Act of 1969
Website	FERC LNG Page

Such analyses are mandated in the National Environmental Policy Act, which became law in 1970. It requires federal agencies understand and disclose the environmental consequences of their decisions. The law gave birth to the phrase "environmental impact statement" ... and the big industry that since has built up around that mandate.

Many federal agencies besides FERC would have their own NEPA roles related to Alaska LNG. They likely would sign on as cooperating agencies for the impact statement.

FERC would try to make sure the EIS is comprehensive enough to serve as BLM's NEPA document, as well as the document needed by the Corps of Engineers, Fish and Wildlife Service, National Marine Fisheries Service, Coast Guard and others for the permits and authorizations they issue.

FERC and other agencies have been collaborating on NEPA reviews of proposed Lower 48 LNG export plants for several years. But the scale of Alaska LNG would be far grander than, for example, the roughly $10 billion Cameron LNG project in Louisiana or the $4 billion Dominion Cove Point LNG project in Maryland. Each of those had four cooperating federal agencies for their FERC-led environmental reviews completed in spring 2014.

Alaska LNG would have far more complexity. Greater footprint. Bigger potential environmental impact. FERC likely would be juggling the permitting interests of many more federal agencies. For the recently

shelved gas-pipeline project from Prudhoe Bay to Canada, FERC was working with nine cooperating federal agencies on the EIS.

Many of FERC's non-environmental requirements for interstate gas pipelines might not apply to an Alaska LNG export project if the pipeline and treatment plant are not deemed interstate facilities under federal law. These include FERC's rules and policies on customer access (open seasons), rate regulation, tariff provisions and eminent domain.

BUREAU OF LAND MANAGEMENT

The gas pipeline would cross hundreds of miles of federal land. BLM would grant the permit allowing use of this public land.

The Alaska LNG project sponsors would apply to use federal land for the pipeline corridor as well as for pipeline compressor stations, work camps, contractor and material yards, helipads, roads and the like related to construction.

In advance of construction, the sponsors would apply to use federal land temporarily for field work to study the route, ice and snow pads, and temporary roads, camps, contractor yards and pipe-storage areas.

BLM would work with other federal agencies if the pipeline route crosses land they oversee. The route likely would skirt two wildlife refuges and two national parks without entering them and completely bypass the big military bases by Fairbanks. It's unclear how close the route would come to the Clear Air Force Station southwest of Fairbanks, but if the route penetrates that land, the Air Force would need to sign off on BLM's right-of-way grant.

Separately, BLM permits the purchase and extraction of construction gravel from federal land under the Materials Act.

BLM would need to consider environmental impacts before acting on any of these permits.

Bureau of Land Management	
Oversight	Authorizes use of federal land for pipelines, compressor stations, construction activities, gravel extraction, etc.
Key laws	Mineral Leasing Act of 1920; Materials Act of 1947; National Environmental Policy Act of 1969
Website	BLM Alaska

ARMY CORPS OF ENGINEERS

The project would touch a variety of wetlands in the 800-mile span between the Nikiski port in southern Alaska and Point Thomson/Prudhoe Bay on the Arctic Coast:

- Forested wetlands whose disruption could affect nutrients, stream flows and water quality.
- Scrub-and-shrub wetlands that serve a similar function as forested wetlands, but also support bird nests and animal browse.
- Emergent wetlands of sedges, grasses and scattered shrubs that buffer floodwaters, moderate stream flows and are home to juvenile fish, waterfowl and other wildlife.
- Miscellaneous other wetlands, which include ponds, small lakes and streams.

Within these types of wetlands lie many nuances and subtleties — such as those slaked by groundwater; those fed by rain, snow and overland flow; and those watered by both, to cite one example.

This is where the Corps of Engineers comes in. It regulates the discharge of dredged or fill material into U.S. waters or wetlands. Trenching the pipeline through wetlands would disturb them and would need Corps approval. The Corps would consider not only the trench, but on how the buried pipeline would affect the function of surrounding wetlands. Or it would direct the sponsors to avoid particular wetlands.

The same goes for any wetlands affected by constructing the LNG plant, pipeline compressor stations, pipeline construction camps and the like, as well as the gas treatment plant at Prudhoe.

Army Corps of Engineers	
Oversight	Authorizes placement or discharge of dredged or fill material into U.S. waters or wetlands, which would apply to gas pipeline burial as well as other construction activities. Permits pipeline crossings of navigable water bodies. Would permit transport of dredged sediment to Beaufort Sea disposal site if North Slope shipping channel needs to be dredged to bring in construction materials.
Key laws	Clean Water Act of 1972; Rivers and Harbors Act of 1899; Marine Protection, Research and Sanctuaries Act of 1972; National Environmental Policy Act of 1969
Website	U.S. Army Corps of Engineers, Alaska District

The Corps also would permit the pipeline crossing of rivers and other navigable water bodies, whether the pipe spans the river or tunnels under it.

This permit stems from one of the nation's oldest environmental laws: the Rivers and Harbors Act of 1899. Section 10 basically aims to avoid the chaos of anybody putting anything they want in waters that other people use.

A Section 10 permit aims to protect the navigable integrity of the water body from new structures, dredging or disposed material.[4]

The Corps has a third permitting authority that could apply to the Alaska LNG project. If the project sponsors need to deepen the shipping channel to Prudhoe Bay's West Dock so that sealifts of deeper-draft barges could deliver construction materials, the Corps would permit transport of dredged sediment to an offshore disposal site in the Beaufort Sea.

The Corps or the Environmental Protection Agency separately would permit the offshore disposal site, as discussed in the next section.

ENVIRONMENTAL PROTECTION AGENCY

Alaska LNG would need to build a huge plant at Prudhoe Bay to remove carbon dioxide and other impurities from the produced gas. This would be a megaproject all by itself, likely costing more than $10 billion.

LNG buyers don't want CO_2 in the gas. LNG sellers don't want it either. CO_2 doesn't burn, it becomes corrosive when mixed with water, and it would solidify during liquefaction (think dry ice), clunking up the machinery.

So the project sponsors would build a gas treatment plant to remove about 500 million cubic feet a day of CO_2 from the produced gas stream and inject it back underground to help pressure more Prudhoe oil to the surface.

The gas treatment plant mainly would be built outside Alaska, hauled to the North Slope aboard sealifts during three or four summers, then assembled. These would be the biggest sealifts there in many years. An approach channel might need to be deepened to get the mega-barges into Prudhoe's West Dock.

If so, the sponsors would need a Corps of Engineers permit before depositing dredged material in the

Environmental Protection Agency	
Oversight	Could be involved in designating and developing a management plan for a Beaufort Sea site that would receive dredged material if a deeper shipping channel is needed to transport construction material to the North Slope. Would also have oversight of state air-emissions and wastewater-discharge permits.
Key laws	Marine Protection, Research and Sanctuaries Act of 1972; National Environmental Policy Act of 1969
Websites	Ocean dumping Marine Protection, Research, and Sanctuaries Act

ocean. The EPA would need to concur on the permit. Either the Corps or the EPA would identify a Beaufort Sea disposal site. If the EPA designates the site, the EPA and the Corps would develop a site-management plan and revise it every 10 years. If the Corps picks an alternative site, the EPA must approve it.

Any dredging that might be needed in upper Cook Inlet for LNG plant construction at Nikiski or operations would follow a simpler process. The project sponsors would need a Corps permit and disposal site. EPA wouldn't need to OK the permit but would maintain oversight of the permit and disposal site.

EPA could play several other roles in the Alaska LNG project.

It would review and have oversight of Corps' permits to place construction fill material in wetlands, streams, rivers and lakes.

The Alaska Department of Environmental Conservation has been delegated responsibility to issue permits on air emissions — from the gas treatment plant, the LNG plant, pipeline compressor stations and elsewhere — and wastewater disposal. The EPA has authority to step in if it finds the state permits are inconsistent with applicable laws and regulations.

EPA also would be a cooperating agency and would review the adequacy of the Alaska LNG environmental impact statement.

FISH AND WILDLIFE SERVICE / NATIONAL MARINE FISHERIES SERVICE

Congress has split oversight of endangered and threatened species, and marine mammals. It assigned some to the Fish and Wildlife Service. The National Marine Fisheries Service oversees others.

Polar bears, walruses and sea otters, among others — Fish and Wildlife Service.

Whales, seals and sea lions, among others — National Marine Fisheries Service.

The Alaska LNG sponsors would need authorizations from both agencies. The processes are similar and rigorous under the variety of federal laws that apply,

	Fish and Wildlife Service
Oversight	Ensures that endangered or threatened species are not further imperiled. Preserves populations of polar bears, walruses, sea otters and certain other marine mammals. Protects migratory birds and the taking or molesting of bald and golden eagles or their nests. In all cases, authorizes isolated cases of harassment, injury or even death under certain circumstances.
Key laws	Marine Mammal Protection Act of 1972; Endangered Species Act of 1973; Migratory Bird Treaty Act of 1918; Bald and Golden Eagle Protection Act of 1940; National Environmental Policy Act of 1969
Websites	Incidental take authorizations Endangered species Alaska Region eagle permit program

principally the Marine Mammal Protection Act of 1972 and the Endangered Species Act of 1973.

Other laws are important, too, such as the Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, Fur Seal Act, Magnuson-Stevens Fishery Conservation and Management Act's essential fish habitat provisions and, of course, the National Environmental Policy Act, which mandates that agencies describe and disclose the environmental implications of their decisions.

To account for the incidental take of marine mammals — unintentional harassment, injuries or deaths — each agency would issue an "incidental take authorization." These come in two forms: A one-year incidental harassment authorization, or a letter of authorization valid for up to five years and supported by specific regulations. The authorization would govern the do's and don'ts of Alaska LNG activities pertaining to the marine mammals.

The public process needed to obtain these can take months to more than a year, depending on the type of authorization requested.

As for endangered or threatened species, the gas

project could encounter perhaps 10 or more of them. Ten were listed in the October 2012 environmental impact statement for the smaller, 737 -mile state-sponsored gas-pipeline project from Prudhoe Bay to near Anchorage.[5]

These were bowhead, fin, humpback and Cook Inlet beluga whales, Steller sea lions, Eskimo Curlews, polar bears, spectacled and Steller's eiders, and the Southwest stock of Northern sea otters.

The endangered Cook Inlet belugas were named even though the state-sponsored gas pipeline would stop short of Cook Inlet. The belugas were noted because the project might need to deliver construction materials to the Port of Anchorage, which could disturb whales and their critical habitat. Pipeline construction also could cross salmon streams that flow to Cook Inlet, possibly reducing the food available to belugas, the EIS said, although both risks could be mitigated to minimize the chances of a problem. The Alaska LNG project plans to lay its pipeline across Cook Inlet, through beluga habitat, though sponsors haven't selected their preferred route yet.

The Alaska LNG list of affected endangered or threatened species could exceed 10. For example, the project could affect Beaufort Sea bearded and ringed seals, which were listed as threatened in December 2012.

Then again, humpback whales could come off the endangered list. Their count is up and biologists are considering whether to delist them.[6]

Under the Endangered Species Act, if the Fish and Wildlife Service or National Marine Fisheries Service determines the project is likely to harm a species or its critical habitat, the agency would study the situation and issue a "biological opinion" discussing it and an incidental take statement, if appropriate, allowing construction to proceed under strict conditions.

Bald and golden eagles, and their nests, are protected under a separate law. Killing obviously is a no-no. But so are noises that can be avoided. Construction projects make plenty of noise. Project sponsors would identify the nests along the route and avoid them. A Fish and Wildlife Service permit would be needed for any incidental harm to the eagles or their nests.

Winter construction, when fewer birds are around, is one way to avoid the eagles, endangered birds and migratory birds protected by other federal laws.

Seasonal construction also could mitigate damage to salmon streams and other "essential fish habitat" recognized under the Magnuson-Stevens Act. Federal biologists would be consulted for their recommendations on ways to minimize or eliminate harm from any project work in such habitat.

National Marine Fisheries Service	
Oversight	Ensures that endangered or threatened species, or their habitat, are not further imperiled. Preserves populations of whales, seals, sea lions and certain other marine mammals. In all cases, authorizes isolated cases of harassment, injury or even death under certain circumstances.
Key laws	Marine Mammal Protection Act of 1972; Endangered Species Act of 1973; Magnuson-Stevens Fishery Conservation and Management Act of 1996; National Environmental Policy Act of 1969
Websites	Incidental take authorizations Endangered species

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

The 800-mile pipeline would endure extraordinary stresses and strains due to the terrain and soils it would traverse.

One potential problem: Slopes that could slump, taking the buried pipe with it.

Or these: Frost-heaving ground that could lift the pipe, or thawing frozen soils that cause the pipe to sag.

Or this: Abrupt ground shifts during earthquakes.

Pipeline engineers have devised techniques called strain-based design to combat such problems.

	Pipeline and Hazardous Materials Safety Administration
Oversight	Ensures the pipeline is built and operated to meet the objectives of federal safety standards even if different methods and materials are used because of Alaska's unusual soils and terrain.
Key laws	Natural Gas Pipeline Safety Act of 1968; National Environmental Policy Act of 1969
Websites	PHMSA regulations Realistic strain capacity models for pipeline construction and maintenance

The Pipeline and Hazardous Materials Safety Administration is charged with ensuring the pipeline would be built and operated to meet the objectives of federal safety standards.

The regulations don't really speak directly to the kind of severe longitudinal strain peculiar to Alaska. It's possible, if not likely, the Alaska LNG sponsors would propose to use new or different construction materials or methods — such as in the properties of the steel pipe or the pipe coating — or strain-based design elements that regulations don't specifically cover.

PHMSA would consider issuing a special permit for each deviation from the regulations, as long as the proposed methods or materials meet the standards' objectives.

COAST GUARD

The Coast Guard would play two roles, one reviewing applications for bridges across navigable waterways and another for the LNG plant.

Bridges. Any bridges for the project would be subject to various laws that aim to ensure that the reasonable needs of navigation are maintained on all of the nation's navigable waters.

If the pipeline needed to bridge a navigable waterway, such as the Yukon River, the sponsors would apply for a permit. The Coast Guard would analyze potential navigation impacts as well as environmental, historical and/or socio-economic impacts covered under NEPA and related laws and regulations.

LNG plant. The Alaska LNG plant operating at full capacity would load about five tankers a week. The Coast Guard would assess the suitability of Cook Inlet to handle LNG tanker traffic.

Under a passel of laws as well as an executive order[7] from President Harry Truman in the feverish early days of the Cold War, the Coast Guard has responsibility for the safety and security of waterways, ports and other facilities along waterways, such as LNG plants. This extends to LNG carrier operations in transit and at berth.

The Coast Guard would require project sponsors to submit a "water suitability assessment" of the channel that tankers would sail to and from the LNG plant. The assessment would cover water depths; tidal range; other traffic in the channel; bridges; underwater pipelines and cables; maneuvers required to berth; where people live nearby and other details.

The Coast Guard also would send to FERC its recommendation and analysis to assist the commission with its decision whether to approve the LNG facility.

	Coast Guard
Oversight	Authorizes bridges over navigable waterways. Ensures safety and security of waterways, ports and facilities.
Key laws	General Bridge Act of 1946; Rivers and Harbors Appropriations Act of 1899; Magnuson Act of 1950; Ports and Waterways Safety Act of 1972; Maritime Transportation Security Act of 2002; National Environmental Policy Act of 1969
Websites	Bridge Permit application process LNG facility regulations Maritime security

Beyond this, the Coast Guard generally would support FERC's overall environmental-impact analysis work, providing information on tanker and port operations, potential hazards and ways to mitigate them. Coast Guard regulations detail the fire and earthquake codes, emergency communications and systems, safety training and procedures that the Alaska LNG sponsors would need to follow for their Nikiski terminal.[8]

Before the plant starts up, the owner or operator would need the Coast Guard to approve its facility security plan, and would submit its operations and emergency manuals.

DEPARTMENT OF ENERGY

Congress has barred any natural gas from leaving U.S. borders without Department of Energy approval.

Alaska LNG sponsors likely would apply to the department for two authorizations. That has been the practice among prospective LNG exporters in recent years.[9]

One application would seek permission to export to any of the 18 nations with which the United States has a free-trade agreement covering natural gas. Getting Energy Department approval of these applications is automatic because such trade is deemed to be in the nation's interest.

The other application would cover exports elsewhere in the world. This would apply to almost all LNG importing nations, including such biggies as Japan, China, India and Taiwan. Getting these applications approved can be much more difficult, time consuming and political.

The national interest is key. Federal law says permission to export gas to non-free-trade destinations will be granted unless, after a hearing and public process, the government "finds that the proposed exportation ... will not be consistent with the public interest." Opponents of a proposal must make a persuasive case that exports would be bad for the United States — or the gas can go overseas.

Energy Department officials have said they consider adequacy of U.S. gas supply, energy security, price,

Department of Energy	
Oversight	Authorizes natural gas exports.
Key laws	Natural Gas Act of 1938
Website	Export-import natural gas regulation

job creation, gross domestic product, balance of trade, the environment and other factors in weighing the national interest.

For proposed Lower 48 U.S. LNG exports, opponents have included some gas-consuming petrochemical businesses and utilities, environmentalists and some people who live near the proposed plants.

The Energy Department had approved seven applications for exports to non-free-trade partners as of spring 2014, conditioned on the projects also getting FERC sanctioning. The agency determined opponents did not make strong enough cases against exports. The average time from application to conditional approval was 23 months.

As of spring 2014, the Energy Department had 26 other applications pending. The department also proposed a new approach: To act on applications only after FERC — or other federal agency in charge of environmental assessment — has sanctioned a project for construction, rather than issue conditional approvals while FERC considered the project.

THE PRESIDENT

In 1976, Congress said that if North Slope gas gets exported, the president must specifically say the exports won't hurt the United States.

This presidential involvement applies only to North Slope gas, not to any of the Lower 48 LNG export projects under way or proposed.

Here's what was up back then.

In 1976, the United States was amid an energy crisis.

Oil — U.S. oil production and reserves were

shrinking. Imports were rising. Gasoline prices soaring. An Arab oil embargo — the OPEC Age had dawned.

Natural gas — production and reserves sagging, shortages looming.

Inflation pounded consumers — up 11 percent in 1974; another 9.1 percent in 1975.

Americans were mad, worried, apprehensive.

In 1976, Congress passed the Alaska Natural Gas Transportation Act[10] to help spur development of a pipeline system that would flow North Slope gas to the rescue through Canada down into Lower 48 markets.

To ensure Alaska gas helped North Americans, Section 719j says that if North Slope gas exports exceed 1 million cubic feet a day to somewhere other than Canada or Mexico, "the President must make and publish an express finding that such exports will not diminish the total quantity or quality nor increase the total price of energy available to the United States."

How much is 1 million cubic feet per day? Not much — the furnaces of roughly 1,600 Anchorage homes burn through that amount on a typical January day. A pretty low threshold to trigger the presidential finding. The law remains active.

On Jan. 12, 1988, LNG exports of North Slope gas got such a presidential finding. The now-shelved Yukon Pacific LNG export project was pending then, but President Ronald Reagan's finding doesn't specifically mention that project.[11] It simply declares generically that it's OK to export the gas.

It's unclear whether this 1988 finding would still apply to an export project 30 or more years later, or whether the finding would need to be revisited. U.S. natural gas markets have evolved considerably since the 1980s.

Notes

[1] "Alaska LNG project," http://www.arcticgas.gov/alaska-lng-project.

[2] State of Alaska, "Office of History and Archeology," http://dnr.alaska.gov/parks/oha/.

[3] "Memorandum of understanding related to an Alaska natural gas transportation project," http://www.arcticgas.gov/sites/default/files/documents/2006-us-federal-agency-mou.pdf.

[4] U.S. Army Corps of Engineers, "Section 10 of the Rivers and Harbors Act of 1899 - 33U.S.C. 403," http://www.poa.usace.army.mil/Portals/34/docs/regulatory/Section%2010%20of%20the%20Rivers%20and%20Harbors%20Act.pdf.

[5] U.S. Army Corps of Engineers, "Alaska Stand Alone Gas Pipeline Environmental Impact Statement," http://asapeis.com/joomla/index.php.

[6] National Marine Fisheries Service Alaska Regional Office, "Humpback Whales," http://www.alaskafisheries.noaa.gov/protectedresources/whales/humpback/default.htm#sr.

[7] President Harry S. Truman, "Executive Order 10173 - Regulations Relating to the Safeguarding of Vessels, Harbors, Ports, and Waterfront Facilities of the United States," http://www.presidency.ucsb.edu/ws/?pid=60775

[8] Code of Federal Regulations, "33 CFR 127 Subpart A," http://cfr.regstoday.com/33cfr127.aspx#33_CFR_127pSUBPART_A.

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