

Alaska  **LNG**

Fueling Alaska's Future





The Alaska LNG Project

The Alaska LNG Project is a story of innovative people and technology combining to develop Alaska's vast natural gas resource. BP, ConocoPhillips, ExxonMobil and TransCanada are working with the state of Alaska on a project to bring gas from the challenging arctic environment of the North Slope to the southern coast of Alaska. Alaska LNG is committed to providing fuel for our future while safely developing this project in an environmentally responsible manner.

ACCOMPLISHMENTS

BENEFITS

SAFETY, HEALTH
AND ENVIRONMENT

CHALLENGES

NEXT STEPS





Accomplishments

- 2013 — Summer field studies confirmed design concept and have formed basis for environmental impact assessments
- October 2013 — Nikiski selected as lead site for the liquefaction terminal (~70 miles south of Anchorage)
- Continued work with contractors and local/worldwide expertise to prepare scope of work for next phase of design and permit applications





Benefits

- Single largest investment in Alaska's history
- Creates 9,000-15,000 jobs for design, construction and operation
- Generates billions of dollars of new tax revenue for Alaska
- Provides access to natural gas for Alaskans





Safety, Health and Environment (SHE)

- Committed to operating in a safe and environmentally responsible manner
- Protecting biodiversity and ecosystem services are key factors when working in Alaska
- We respect local traditions and use local knowledge to improve our environmental stewardship





Challenges

- Megaproject requiring labor, resources and equipment that can handle Alaska's extreme, remote environment
- Complex commercial arrangements with foreign markets requiring long-term commitments
- Responsibility to minimize environmental and socioeconomic impacts





Next Steps

- Continue field studies and environmental baseline assessments
- Conduct detailed engineering and design work for integrated project
- Prepare required state and federal permits and licenses
- Establish a durable gas fiscal regime to enable future phases of the project

NATURAL GAS DEMAND
INCREASES 65% BY 2040



Pipeline

- 42-inch pipeline specially designed to carry gas safely from the North Slope to market
- Routing, geologic, archaeological and environmental assessments in progress

Compressor Stations

- Compressor stations maintain pressure and temperature along the pipeline route

Supply to Alaskans

- Off-take points will supply local gas distribution companies to meet Alaskan demand
- Working with the state to determine exact off-take locations
- Estimated to supply roughly 350 million cubic feet per day annual average

Liquefaction Plant



GAS TREATMENT PLANT

Gas Treatment Plant

The gas treatment plant will be the first built above the Arctic Circle in the North Slope. The current design will require more than 250,000 tons of steel, reaching a footprint of over 200 acres. It will be among the largest LNG treatment plants in the world.

The gas treatment plant will be designed near producing fields to rid gas of all impurities before gas enters the pipeline and travels south.

Pipeline

An 800-mile pipeline will be built to transport gas south across two mountain ranges. Using advanced technology to protect against severe arctic conditions.

Pipeline construction will take 2-3 years, requiring 1 million-2 million tons of steel.

PIPELINE





LIQUEFACTION PLANT

Liquefaction Plant

This integral step in the process is what turns natural gas into its liquid form so it can be safely and efficiently transported to market. It requires a massive conditioning facility with three liquefaction trains spanning up to 500 acres.

Nikiski in the East Cook Inlet has been selected as the lead site after assessing 22 locations in Alaska.



Storage and Loading

LNG is the best format for long-distance transportation of gas to the national and world market. The LNG will be stored in large tanks 160 feet tall and roughly 300 feet in diameter. When ready for shipping, LNG will be pumped onto LNG shipping tankers, each capable of carrying an average of 3 billion cubic feet of LNG.

One cargo ship could fuel all of Alaska's residential gas needs for two months.

STORAGE AND LOADING



Supply to Alaskans

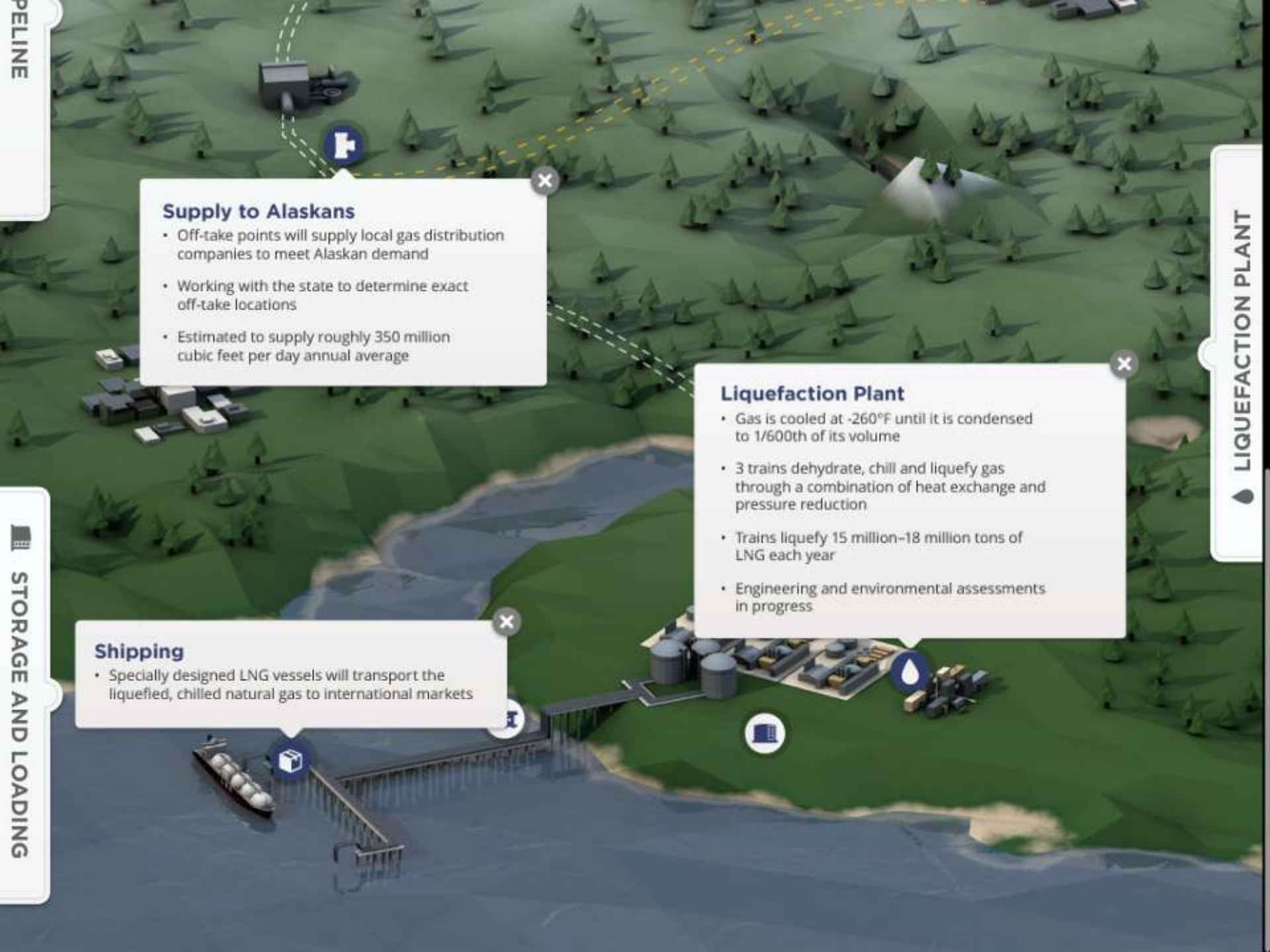
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Liquefaction Plant

- Gas is cooled at -260°F until it is condensed to 1/600th of its volume
- 3 trains dehydrate, chill and liquefy gas through a combination of heat exchange and pressure reduction
- Trains liquefy 15 million-18 million tons of LNG each year
- Engineering and environmental assessments in progress

Shipping

- Specially designed LNG vessels will transport the liquefied, chilled natural gas to international markets



DELIVERY

STORAGE AND LOADING

LIQUEFACTION PLANT



Modular Construction

