



LNG and Safety

DID YOU KNOW?



- **LNG is simply natural gas cooled to -260 degrees and condensed into a liquid.**
- **The industry works within the closely monitored framework of dozens of regulations from multiple government agencies.**
- **More than 77,000 LNG cargoes have been delivered safely in the past 50 years.**

Safety is a top priority of the US LNG industry, which has a proven record of minimizing risks at every step of the supply chain. In fact, it has one of the most exemplary safety records in the hazardous materials processing and transportation industries. From the liquefaction facility to the overseas power plant, LNG operators have, for decades, been working closely with both regulators and first responders to maximize safety and reliability. A 2013 report by the U.S. Department of Energy (DOE) touts this longtime success:

“For more than 40 years, the safety record of the global LNG industry has been excellent, due to attention to detail in engineering, construction, and operations.”

- U.S. Department of Energy

This success is due to both the inherent chemical properties of LNG and to the tireless work of engineers and operators to prioritize safety.

Chemical Properties

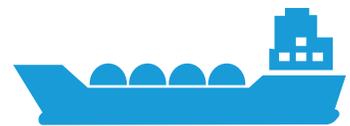
LNG is simply natural gas that is chilled to -260 degrees Fahrenheit at which point it becomes a liquid that occupies 1/600th of its volume as a gas. It is stored at ambient pressure, and when exposed to a source of heat, LNG slowly vaporizes back into natural gas. If spilled on land or water it slowly vaporizes and leaves no residue behind. Natural gas is only flammable within a gas-to-air concentration of 5 to 15 percent, according to an analysis by the Federal Energy Regulatory Commission (FERC). This makes fires and similar incidents along the supply chain unlikely and exceedingly rare. A recent DOE report compares LNG safety to that of other fuels:

“The physical and chemical properties of LNG render it safer than other commonly used hydrocarbons.”

- U.S. Department of Energy

Industry Safety Record

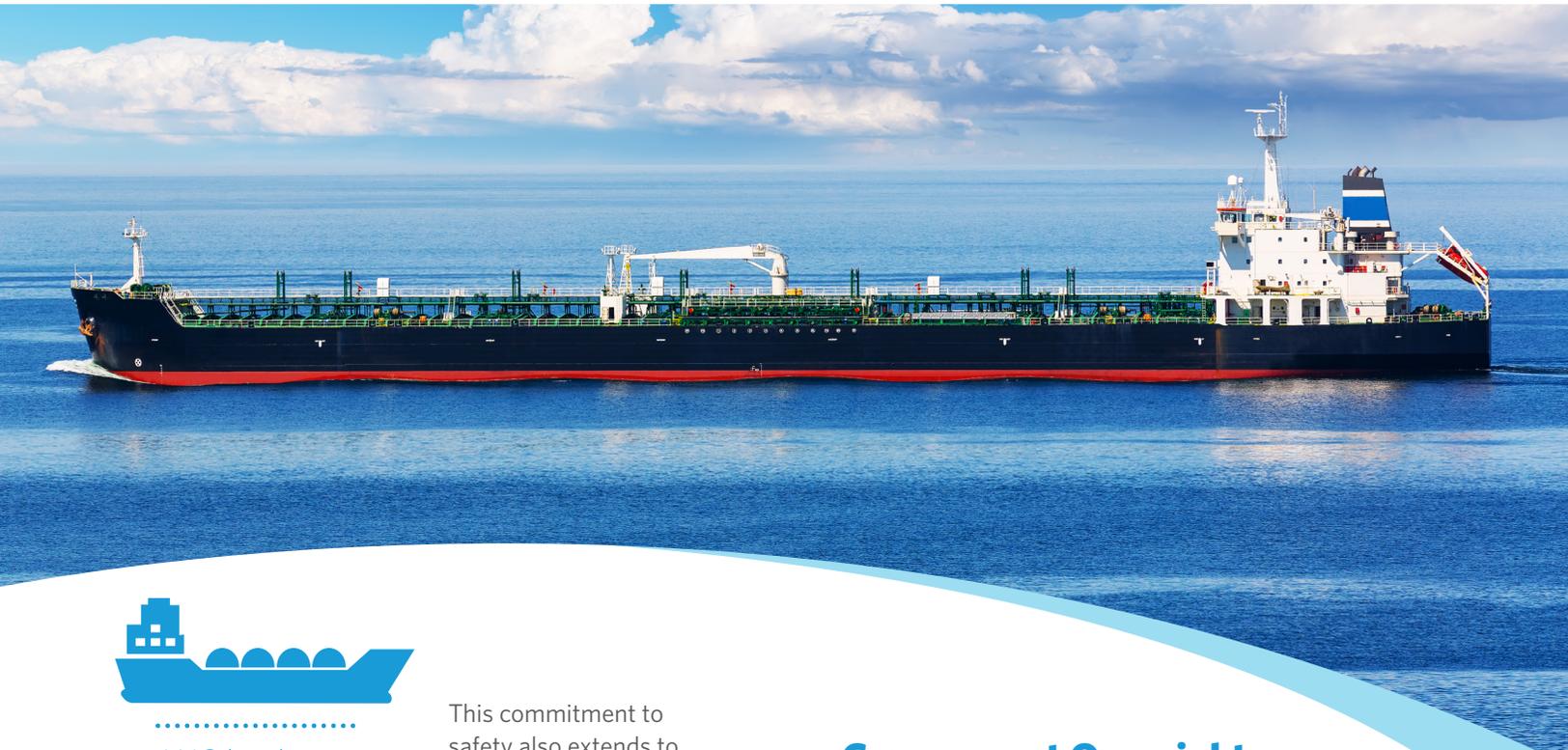
LNG facilities are also designed and operated to the highest safety and environmental standards. Modern LNG tanks use double-walled containment systems, while liquefaction and regasification facilities and midstream systems are subject to dozens of siting, construction, and maintenance standards from the Pipeline and Hazardous Safety Administration.



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have been
SAFELY DELIVERED
in the last 50 years.



LNG shipments have covered more than 100 million miles – about 4,000 times around the earth – without major safety incidents either in port or at sea.



LNG has been **SAFELY TRANSPORTED** since 1959, with an impeccable record at sea.

at sea – partially due to double-hulled ships and layers of automated technological safeguards. According to a 2014 report by the Society of International Gas Tanker and Terminal Operators, more than 77,000 commercial LNG cargoes have been safely delivered in the last 50 years.

This commitment to safety also extends to shipping. LNG has been safely transported since 1959, and logs kept of maritime accidents show an industry with an impeccable record

“During this period there has been no loss of cargo tank containment and no onboard fatalities directly attributable to the cargo. This is a very impressive, in fact unprecedented, safety record for the carriage of liquid hydrocarbons in bulk by sea.”

– Society of International Gas Tanker and Terminal Operators

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Government Oversight

No amount of LNG can be transported or handled in the U.S. without the explicit approval of a host of federal overseers. To ensure safe operations, the US LNG industry works with a number of federal agencies including the FERC, the Department of Transportation, the Department of Homeland Security, the Transportation Security Administration, and the US Coast Guard.



Department of
Transportation
Security
Administration



Throughout decades of safe operations, the LNG industry has proven its commitment to fully comply with regulations and take extra care to prevent accidents. As demand for natural gas rises, the LNG industry will continue to adopt, implement, and update safety measures that protect the health and well-being of all parties.

