

SOLUTION BRIEF

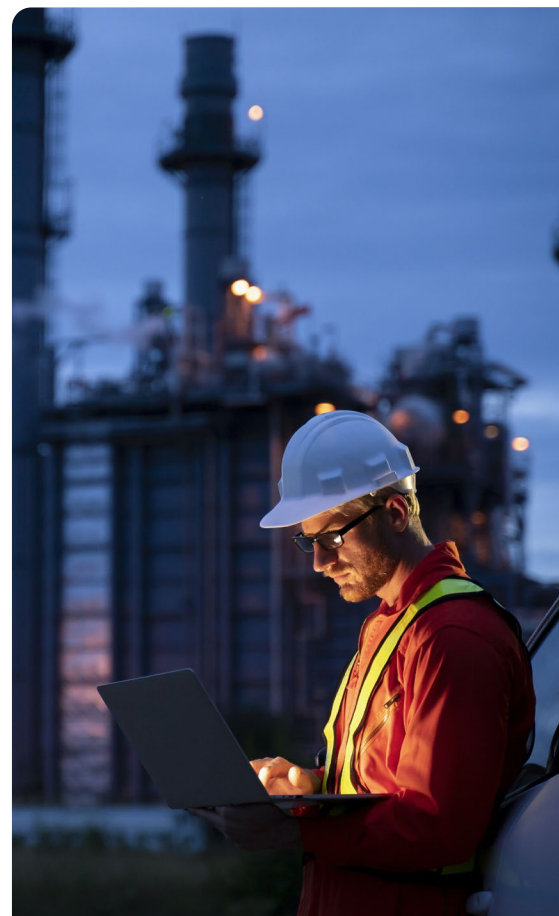
North America's growing LNG industry needs better technology

Introduction

The energy industry is transitioning from high-carbon fuels as primary sources of power or the primary fuel for power generation. Amid this shift, natural gas is becoming a fuel of choice to replace coal-fired power plants for generating electricity. As a result, demand for natural gas is increasing at a significant rate. Moving natural gas to consumption points generally occurs via pipeline, but converting it from its gaseous form to liquefied natural gas (LNG) and shipping it in special vessels to markets that can't get significant natural gas through pipelines is becoming more popular.

LNG is becoming the dominant energy source for Western European electricity generation plants and the primary feedstock for industries that require natural gas (such as plastics).

The war in Ukraine, where the nation is battling an invasion from Russian forces, has created a unique set of conditions for LNG markets. In response to the invasion, most European Union countries have greatly reduced or ceased Russian natural gas shipments from the Nord Stream 1 pipeline system. In addition, Russian gas companies have demanded payment in rubles, which shifts considerable currency risk to the buyer.



Recent interest in “greener” LNG cargoes signifies the growing importance of carbon-related topics within the industry.

Challenges

Natural gas transported via LNG comes from a few gas-rich countries with adequate gas well inventories, pipelines, and processing capabilities. For Western European markets, the most sensible sources are North America, Trinidad, West Africa, and the Middle East. North America and the Middle East have the most latent upstream capacity, where exploration and production companies can produce additional natural gas with modest, or even low, amounts of additional capital. And North America possesses an adequate, mature pipeline and processing infrastructure.

The most obvious limitation to increases in LNG capacity is the lack of North American LNG processing facilities, where natural gas is liquified into LNG, loaded onto purpose-built tankers, and shipped to regasification facilities in Western Europe. The distribution of this natural gas in Europe will greatly erode the dominance that Russian gas companies have held for the last few years.

In the US, only a handful of LNG plants are operating today, mostly scattered around the Gulf Coast. But with increased LNG demand, more than a dozen new LNG plants are in the works nationwide. These projects require billions of dollars in capital, take years to design and build, and are heading toward their final investment decisions. They are the future of the US LNG industry. The plants will be under construction for years amid operations readiness activities such as workforce development and computerized maintenance management system (CMMS) development. But once commissioning concludes, startup of the plants will endow their owners with billions of dollars in revenue nearly overnight.

At LNG plants, the business and operations processes—as well as the most pressing business challenges—are similar to those at gas plants, refineries, and chemical plants.



Accurate production accounting, operating cost management, product measurement, maintenance, and process safety are among the most crucial aspects of the business.

Oracle Cloud ERP changes the game for LNG companies

Companies that recognize the value of fully integrated, low administrative burden information systems have the highest likelihood of reaching their full potential. As the new plants become formidable LNG machines, focusing on the most business- and safety-critical processes and how to grow into large and efficient organizations should be top priorities for the executive teams. Oracle Cloud ERP can help new and growing companies avoid the traps of a large IT team; heavily customized, labor-intensive business processes; multiple data sources; and complex system integrations.

A modern ERP and its CMMS must meet the needs of a 21st-century enterprise. For the burgeoning LNG industry, this puts a premium on maximum reuse of high-quality single source of truth data enabled by full integration of the many modules that support functional business processes, such as maintenance, supply, finance, and HR. Adopting true software-as-a-service (SaaS) solutions must be differentiated from older, on-premises ERP systems placed onto cloud infrastructure. [Oracle SaaS solutions](#) provide much more secure, out-of-the-box functionality, avoiding costly and risky implementations. Oracle SaaS products also provide quarterly upgrades—a built-in version of continuous improvement. These key aspects of Oracle's SaaS ERP let executives focus on the true source of value: safely providing more LNG cargoes at the lowest possible operating cost and the highest possible market-tolerable prices. No more perpetual ERP implementations, upgrades, and customizations, and no need for a large IT support ecosystem that can bloat IT budgets quickly.

Do your LNG plans include Oracle? [Contact Oracle today.](#)

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