

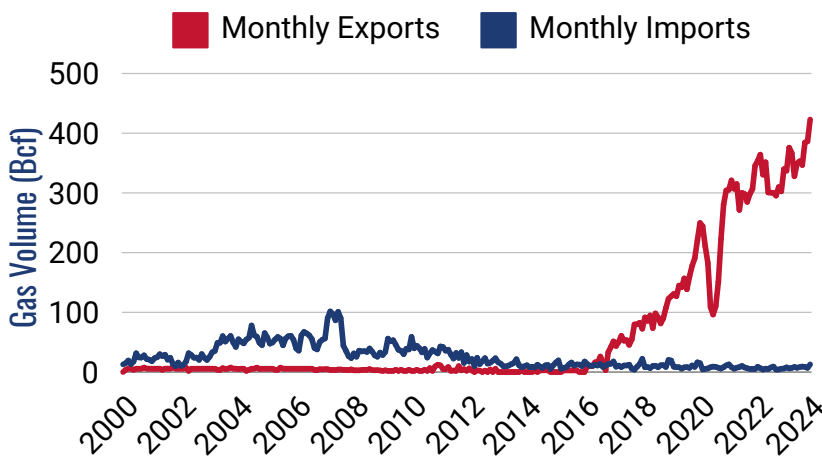
Quick Facts

- The United States is the world's largest liquified natural gas (LNG) exporter. Fracking, coal divestment, and the war in Ukraine have significantly increased the supply of and demand for U.S. LNG since 2016.
- Explosive short-term demand has driven longer and larger LNG contracts to maintain stable prices. Approved exports to LNG importers currently exceed 200% of anticipated export supply in 2030.
- However, gas is a nonrenewable resource vulnerable to pricing fluctuations and political risk. As Western economies prioritize clean, renewable energy, long-term reductions in natural gas demand are expected.
- Over the next two decades, U.S. LNG will increasingly benefit Asian nations where gas is the primary source of electricity generation or an incentivized transition fuel from coal and oil.

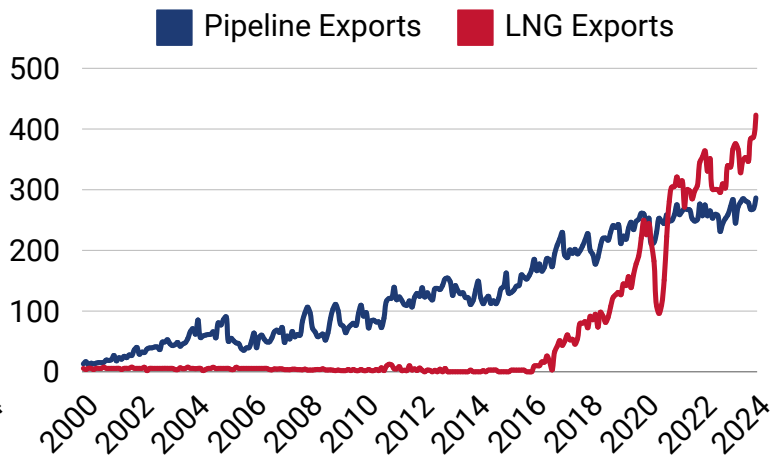
The United States Liquified Natural Gas Boom

- While gas liquefaction has enabled long-range gas transport since the 1960s, hydraulically fractured wells surpassed other drilling and completion techniques in the United States for the first time in 2011. The Sabine, Corpus Christi, and Cove Point liquefaction projects, opened in 2016, incited an LNG boom that resulted in the United States becoming the top global exporter of liquified natural gas in 2023.
- Following the Russian invasion of Ukraine in 2022, the European Commission's REPowerEU plan pledged to import 1765 billion cubic feet (Bcf) of U.S. LNG per year until 2030 to divest from Russia and expedite Europe's transition from coal and oil. U.S. LNG exports to Europe increased 300% from 2021-2023.
- By 2030, 43% of the EU's energy consumption is expected to come from renewables. Structural gas demand is expected to decline starting in 2024, with U.S. imports peaking in 2027.

U.S. LNG Imports and Exports



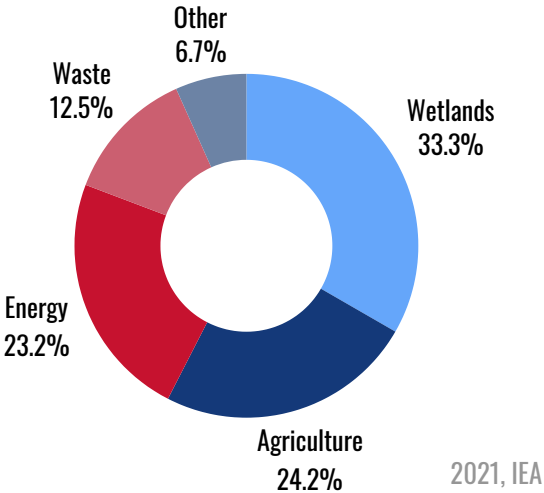
U.S. Pipeline vs. LNG Exports



Climate Change Considerations

- Liquefied natural gas is predominantly comprised of methane, a potent greenhouse gas. Methane leakage is responsible for around 30% of the post-industrial rise in global temperatures.
- In 2021, the U.S. and EU launched the Global Methane Pledge (GMP) to reduce global methane emissions at least 30% from 2020-2030. Capturing emissions from oil and gas production is a highly cost-effective climate change abatement strategy.
- During President Biden’s 2023 Methane Finance Sprint at the Major Economies Forum, GMP member-states raised over \$1 billion in new grant funding for methane emissions reduction.

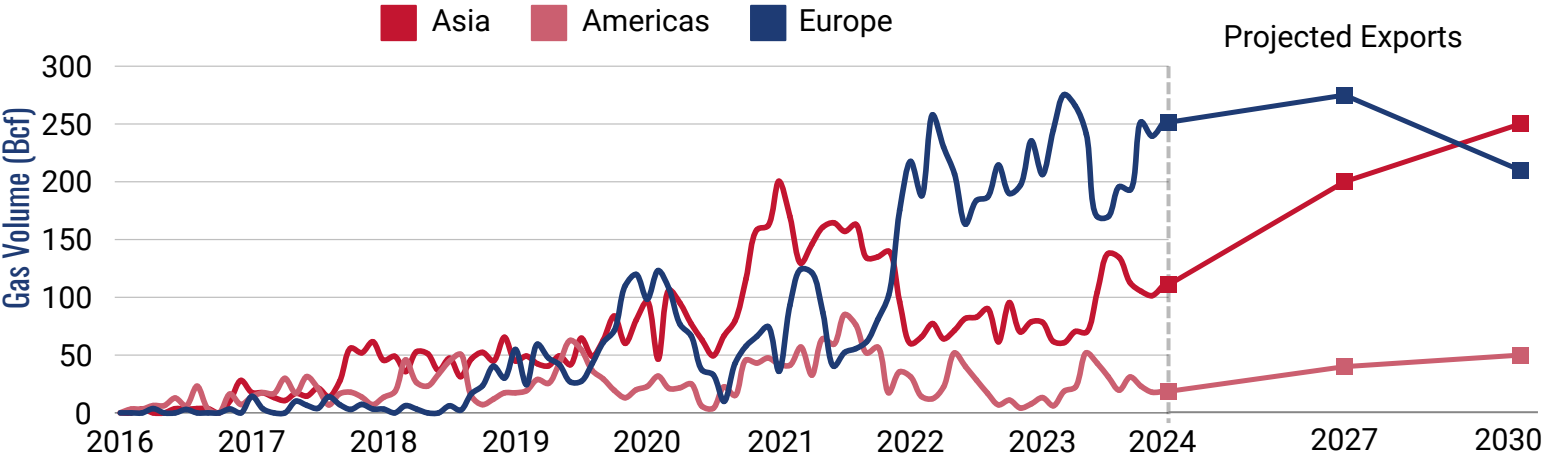
Global Methane Emitters



Rising East and Southeast Asian Demand

- With the Americas, Australia, and Europe transitioning away from fossil fuels and towards clean energy sources, Asian markets are expected to drive over 75% of global LNG demand by 2050.
- In 2023, China surpassed Japan as the world’s top LNG importer. Driven by both coal replacement initiatives and industrialization, Chinese gas consumption has risen nearly 7% a year since 2017.
- Japan, South Korea and Taiwan continue to import record amounts of LNG. Japan, importing 90% of its energy needs, is the largest financier of LNG export capacity and second largest importer of U.S. LNG.
- In Southeast Asia, LNG imports are expected to exceed exports for the first time in decades. Lowered domestic production and economic growth drives imports in Indonesia, Malaysia and Thailand, while initiatives like Vietnam’s Power Development Plan 8 aims to shift other nations from coal to gas.

U.S. Monthly LNG Export Volume by Region



Amidst conflicts in Ukraine and the Middle East and tensions in the South China Sea, U.S. liquefied natural gas exports temporarily provide a stable and flexible energy supply to international markets. Price volatility, supply constraints, and climate action goals, however, make LNG an unstable long-term energy source.