OFFICE OF RESOURCE SUSTAINABILITY

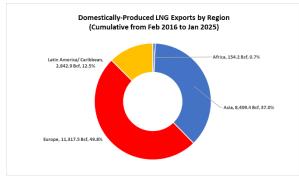
Liquefied Natural Gas (LNG) Exports

March 2025

The United States produces more natural gas than it uses, and LNG export facilities are operating or being built to deliver gas overseas. Nine large-scale and three small-scale LNG facilities have begun export operation. DOE's Office of Fossil Energy and Carbon Management (FECM) monitors U.S. LNG trade through its regulatory role under the Natural Gas Act (NGA).

Overview

The United States has become the world's largest producer of natural gas, creating the opportunity for exports. Companies that want to export natural gas must get authorization from FECM. The <u>Natural Gas Act</u>¹ requires FECM to make public interest determinations on applications to export LNG to countries without free trade agreements with the U.S. (non-FTA countries).



FECM also publishes information on LNG exports in its <u>Natural Gas Imports and Exports Monthly Report</u>.² LNG exports from the Lower 48 started in 2016. As of January 2025, U.S. export terminals have sent cargos to 48 countries on five continents, mostly from large-scale facilities. Small shipments have been exported since 2016 in cryogenic ISO containers, to customers predominantly in Central America and the Caribbean.

LNG Export Application Process and Activity

There are two standards of review under the NGA, based on the intended destination of LNG. Where countries have a free trade agreement with the U.S.

(FTA countries), exports are deemed consistent with the public interest. The NGA directs DOE to evaluate LNG export applications to non-FTA countries. DOE is required to grant requested export authority for non-FTA countries, unless it finds the proposed exports will be inconsistent with the public interest, or where trade is prohibited by law or policy (for example, Cuba, North Korea, and Iran). DOE acts on long-term applications to non-FTA countries after completing a public interest review that involves several criteria, such

as economic and environmental reviews, including examination under the National Environmental Policy Act (NEPA). DOE is typically a cooperating agency for review under NEPA, with the Federal Energy Regulatory Commission (FERC) or the Department of Transportation's Maritime Administration (MARAD) acting as the lead agency.

Obtaining a DOE authorization to export LNG to non-FTA countries is an important step for most projects in their path toward financing and construction. After comprehensive reviews, DOE has issued a total of 41 long-term LNG authorizations³ for any country in the world not prohibited by U.S. law or policy, in a cumulative amount of 53.4 billion cubic feet per day (Bcf/d), as of March 31, 2025. DOE has also issued several authorizations under its Small Scale Rule, as summarized here.4 Currently, U.S. export capacity is more than 15 Bcf/d, and a total of over 26 Bcf/d of capacity is in various stages of operation and construction. Some of the companies that have LNG export authorizations from DOE have not reached final investment decisions (FID) on their projects. Construction of large facilities takes years to

Foundational Studies for DOE's Public Interest Reviews of LNG Exports

Historically, DOE has relied on economic and environmental studies to inform DOE's public interest review of applications for exports of LNG to non-FTA countries. On December 17, 2024, DOE provided notice of availability of a multivolume study updating DOE's understanding of the potential effects of U.S. LNG exports on the domestic economy; U.S. households and consumers; communities that live near locations where natural gas is produced or exported; domestic and international energy security, including effects on U.S. trading partners; and the environment and climate (2024 LNG Export Study) (see 89 Fed. Reg. 104,132 (Dec. 20, 2024)). DOE invited public comment for 60-days and extended it for 30-days. In total, the comment period ran from December 20, 2024 through March 20,2025.

The 2024 LNG Export Study comprises a summary report and four appendices. Appendix A: Global Energy and Greenhouse Gas Implications of U.S. LNG Exports presents an analysis of the global market demand for U.S. LNG exports across a range of scenarios and the global emissions impacts of increased U.S. LNG exports through 2050. Second, Appendix B: Domestic Energy, Economic, and Greenhouse Gas Assessment of U.S. LNG Exports presents an analysis of the implications of the various U.S. LNG export levels on the U.S. economy and greenhouse gas (GHG) emissions. Third, Appendix C: Consequential Greenhouse Gas Analysis of U.S. LNG Exports is an analysis of global GHG emissions in response to increased U.S. LNG Exports. Finally, Appendix D: Addendum on Environmental and Community Effects of U.S. LNG Exports is a literature review of the effects of upstream, midstream, and downstream natural gas production and exports on the environment and on local communities.

¹ 15 U.S.C. § 717 et seq., https://www.govinfo.gov/content/pkg/COMPS-868/pdf/COMPS-868.pdf.

² https://www.energy.gov/fecm/listings/natural-gas-imports-and-exports-monthly-reports.

³ The 41 long-term LNG authorizations include 39 final orders and 2 conditional orders.

⁴ https://www.energy.gov/fecm/articles/lng-trades-markets.

complete and can cost billions of dollars. A complete list of long-term LNG export applications and their current status can be found in DOE's <u>Summary of LNG Export Applications</u>.⁵

LNG Facilities

Nine large-scale LNG facilities are using authorizations to export U.S.-sourced natural gas. Four other large-scale terminals with DOE authorization are under construction pursuant to FID. Terminals that have DOE authorizations report their status and construction progress to the Department twice per year, and these Semi-Annual Reports⁶ are available on DOE's website. Customers wishing to purchase LNG from the United States can contact one of the companies authorized or seeking export authority, as listed in the Online Docket Room.⁷

NORTH AMERICAN LARGE-SCALE LNG EXPORT PROJECTS WITH NON-FTA EXPORT AUTHORITY FROM DOE						
		Volume (Bcf/d)				
	Project	Authorize d	Under Construction Pursuant to FID	Operating	Initial Operation (or est.)	Construction Status
1	Sabine Pass Cameron, LA	4.55	0	4.55	Feb. 2016	Operating
2	Cove Point LNG Calvert Cty, MD	0.77	0	0.77	Mar. 2018	Operating
3	Cameron Hackberry, LA	3.53	0	2.12	May 2019	3 trains operating
4	Corpus Christi Corpus Christi, TX	3.99	1.36	2.63	Dec. 2018	3 trains + train 1 of Stage 3 operating
5	Elba Island Chatham County, GA	0.36	0	0.36	Sep. 2019	Operating
6	Freeport Quintana Island, TX	3.10	0	2.38	Sep. 2019	3 trains operating
7	Golden Pass Sabine Pass, TX	2.57	2.57	0	Late-2025 (est.)	Under construction
8	Venture Global Calcasieu Pass Cameron, LA	1.70	0	1.70	Mar. 2022	Operating
9	Lake Charles Lake Charles, LA	2.33	0	0	N/A	Pending FID
10	Delfin Gulf	1.80	0	0	N/A	Pending FID
11	Port Arthur Port Arthur, TX	1.91	1.91	0	2027 (est.)	Under construction
12	Louisiana LNG Infrastructure Calcasieu Parish, LA	3.88	0	0	N/A	Pending FID
13	Gulf LNG Jackson County, MS	1.53	0	0	N/A	Pending FID
14	Venture Global Plaquemines Plaquemines Parish, LA	3.40	2.30	1.10	Dec. 2024	Operating
15	Rio Grande LNG Brownsville, TX	3.61	2.10	0	2027 (est.)	Under construction
16	Texas LNG Brownsville, TX	0.56	0	0	N/A	Pending FID
17	Alaska LNG Kenai Peninsula, AK	2.55	0	0	N/A	Pending FID
18	Commonwealth ¹ Cameron Parish, LA	1.21	0	0	N/A	Pending FID
19	Venture Global CP2 ¹ Cameron Parish, LA	3.96	0	0	N/A	Pending FID
	U.S. TOTAL	47.31	10.24	15.61		
20	Mexico Pacific Limited Sonora, Mexico	1.7	0	0	N/A	Pending FID
21	Energia Costa Azul <i>Ensenada, Mexico</i>	2.18	0.44	0	Spring 2026 (est.)	Phase 1 Under construction Phase 2 FID Pending
22	Epcilon LNG Sonora, Mexico	1.08	0	0	N/A	Pending FID
23	Vista Pacifico LNG Sinaloa, Mexico	0.55	0	0	N/A	Pending FID
24	NFE Altamira FLNG Tamaulipas , Mexico	0.40	0	0.40	Aug. 2024	Operating
	NORTH AMERICA TOTAL	53.22 ²	10.68	16.01		

¹ The non-FTA authorization is conditional.

For more information, please visit https://www.energy.gov/fecm/regulation

² Approved amounts listed here do not include non-FTA authorizations issued to small-scale facilities, which brings the total to 53.37 Bcf/d. Additional small-scale authorizations issued specifically under DOE's Small-Scale Rule are not additive to the cumulative total.

⁵ https://www.energy.gov/fecm/articles/summary-Ing-export-applications-lower-48-states.

⁶ https://www.energy.gov/fecm/semi-annual-reporting-requirements-lng-exporters-2010-2025-dockets?nrg redirect=473095.

https://www.energy.gov/fecm/articles/electronic-docket-room-e-docket-room.