Playing with Fire:

The Climate Impact of the Rapid Growth of LNG

ENVIRONMENTAL INTEGRITY PROJECT

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THE ENVIRONMENTAL INTEGRITY PROJECT

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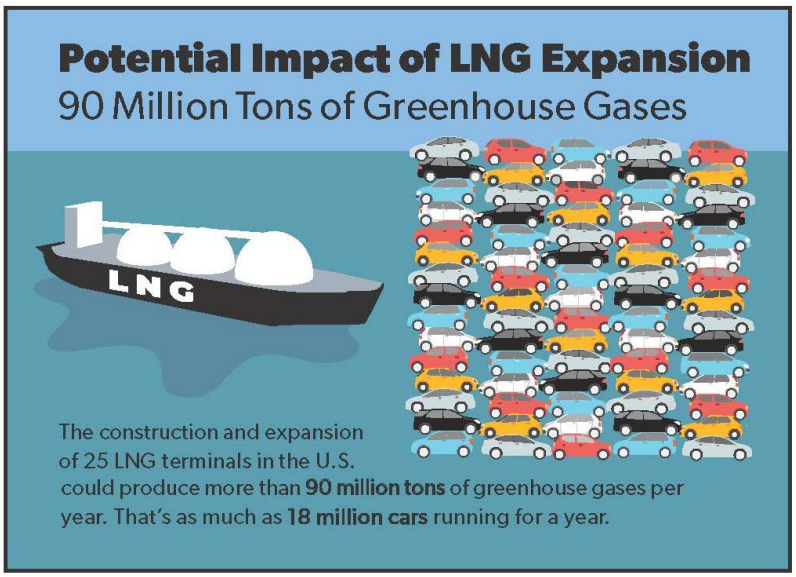
Executive Summary:

The United States went from exporting no liquefied natural gas (LNG) in 2015 to becoming one of the largest exporters in the world by 2021.[1] Now, as some countries begin to avoid Russian energy imports because of its invasion of Ukraine, the unprecedented supply disruptions caused by the war have increased pressure on U.S. LNG exporters to fill the void. In March 2022, as European gas prices surged to record levels, America exported 7.6 million metric tons of LNG, quadruple the amount four years earlier.[2] By the end of this year, the U.S. is expected to have more LNG export capacity than any other country in the world.[3] But this rapid growth will have a significant environmental impact. Twenty-five LNG construction or expansion projects in the U.S., including four new LNG terminals currently being built in Texas and Louisiana, could emit more than 90 million tons of greenhouse gases per year.[4] That's almost as much climate-warming pollution as 18 million passenger vehicles running for a year – more than from all the cars and trucks in Florida or New York State.[5] The true carbon footprint of LNG will be several times higher, if all upstream and downstream impacts are included.



Record-breaking gas prices have prompted fossil fuel advocates to push U.S. LNG as a solution to Europe's reliance on Russian gas. Government agencies have also been discussing ways that the Federal Energy Regulatory Commission (FERC) could speed approval of new pipelines and approve requests to increase capacity at existing export terminals to help get natural gas to Europe.[6] On March 25, the Biden Administration announced that it would ensure deliveries of an additional 11 million metric tons of LNG to the European Union in 2022 and FERC has already picked up its pace in approving projects related to LNG.[7]

Since the Russian invasion on February 24, 2022, American companies managed to secure at least nineteen agreements to supply nearly 24 million metric tons of LNG per year – evidence of surging market demand – with around 7 million tons per year contracted by

European buyers. In addition, on March 31, New Fortress Energy announced the proposed construction of the first new LNG export facility since the start of the war: a new deepwater terminal off the coast of Louisiana, with an expected operation date in early 2023. The developers of two other long-planned but stalled LNG projects, both in Louisiana, moved forward with construction in March, further showing strong financial support for LNG in the wartime market. The timeline below lists some of the major developments in LNG since the invasion.

TIMELINE OF MAJOR RECENT DEVELOPMENTS

Date	Location	Event
February 24	Ukraine	Russia launches invasion of Ukraine, increasing global demand for LNG
February 24	Texas	Cheniere signs agreement for Corpus Christi Stage III to supply 1.7 million metric tons of LNG per year[8]
March 9	Louisiana	Construction announced at Plaquemines LNG Terminal[9]
March 16	Louisiana	Venture Global signs agreements to supply 2 million metric tons of LNG per year from the Plaquemines and CP2 LNG terminals[10]
March 24	Texas	NextDecade signs agreement for Rio Grande LNG to supply 1.5 million metric tons of LNG per year to China[11]
March 25	Louisiana, Mississippi	FERC approves Evangeline Pass Expansion and East Lateral Xpress pipeline projects[12]
March 28	Louisiana	Construction announced at Driftwood LNG Terminal[13]
March 29	Louisiana	Energy Transfer signs agreement for Lake Charles LNG to supply 2.7 million metric tons of LNG per year to China[14]
March 31	Louisiana	New Fortress submits application to construct the Louisiana FLNG Terminal[15]
April 6	Texas	NextDecade signs agreement for Rio Grande LNG to supply 1.5 million metric tons of LNG per year to China[16]
May 2	Texas, Louisiana	NextDecade signs agreement for Rio Grande LNG to supply 1.75 million metric tons of LNG per year to France[17] and Energy Transfer signs agreement for Lake Charles LNG to supply 2 million metric tons of LNG per year to Asia[18]
May 3	Louisiana	Energy Transfer signs agreement for Lake Charles LNG to supply 0.4 million metric tons of LNG per year to Korea[19]
May 4	Texas	Cheniere signs agreement for Corpus Christi Stage III to supply 0.85 million metric tons of LNG per year[20]
May 10	Louisiana	Venture Global signs agreements to supply 2 million metric tons of LNG per year to Asia from the Plaquemines and CP2 LNG terminals[21]
May 11	Louisiana	Venture Global signs agreement to supply 1 million metric tons of LNG per year to Malaysia from Plaquemines LNG[22]
May 16	Texas, Louisiana	Sempra signs agreements to supply 3 million metric tons of LNG per year to Poland from the Cameron and Port Arthur LNG terminals[23]
May 25	Texas, Louisiana	Sempra signs agreement for Port Arthur LNG to supply 2.25 million metric tons of LNG per year to Germany[24] and Cheniere signs agreement for Corpus Christi Stage III to supply 0.4 million metric tons of LNG per year to Korea[25]
June 5	Louisiana	Energy Transfer signs agreement for Lake Charles LNG to supply 0.7 million metric tons of LNG per year to China[26]

Source: Public records in Oil & Gas Watch (May 31, 2022); corporate filings and disclosures as of June 5, 2022

The Environmental Integrity Project (EIP) closely tracks the status of new and expanding LNG export terminals and the key environmental approvals they need to obtain on Oil and Gas Watch, a public website that documents the rapid expansion of oil and gas related projects across the country. An analysis of public records available on this website reveals:

1. LNG produced in the U.S. and exported today comes from seven terminals that were built or expanded within the last decade. Three are in Louisiana, two are in Texas, and one each are in Georgia and Maryland. Under their existing FERC approvals and Clean Air Act permits, these facilities have the capacity to produce up to 104.5 million metric tons per year of LNG and are authorized to emit up to 28.3 million tons of greenhouse gases per year (see Table 1). Recent data suggest that six of the existing terminals are operating at close to full capacity.[27]
2. Four new LNG export terminals are under construction and expected to begin operating between 2024 and 2026. Together, these four plants – Golden Pass and Port Arthur LNG in Jefferson County, Texas; Driftwood LNG in Calcasieu Parish, Louisiana; and Plaquemines LNG in Plaquemines Parish, Louisiana – have the capacity to produce up to 83.2 million metric tons of LNG and release up to 27.3 million tons of greenhouse gases per year (see Table 2).
3. Nine projects (six new terminals and three expansions) with the capacity to produce up to 97.2 million metric tons of LNG and authorized to release up to 25.6 million tons of greenhouse gases annually have secured the federal approvals required to begin construction but have not yet begun to do so (see Table 3).
4. Twelve additional LNG projects (10 new terminals and two expansions) have been proposed and are still waiting for approvals from state and federal agencies (see Table 4). These projects could increase liquefaction capacity by more than 130 million metric tons per year and greenhouse gas emissions by over 37.7 million tons per year.[28]
5. Altogether, the 25 LNG projects (20 new terminals and five expansions) that are proposed or under construction (those mentioned in bullets 2, 3, and 4 above) could increase annual greenhouse gas emissions by more than 90 million tons. That's more climate-warming pollution than 20 new coal-fired power plants, or 18 million cars running for a year.[29]

It should be noted that these potential greenhouse gas impacts would come only from operating the LNG terminals and liquefaction plants themselves. They do not include emissions from drilling and hydraulic fracturing; or from pipelines, gas leaks, or processing; or the eventual burning of gas in homes and businesses. If these upstream and downstream contributions are accounted for, the true climate footprint of LNG would be several times higher. Some LNG companies are claiming that they will employ carbon sequestration techniques to reduce their harm to the global climate. But these technologies are untested and pumping carbon dioxide into the ground can be dangerous and is unlikely to make a significant difference. The reality is that a dramatic increase in global reliance on LNG could be playing with fire, from a climate perspective.

Existing LNG Export Terminals Approaching Maximum Capacity

LNG produced in the U.S. and exported today comes from seven export terminals that have the capacity to produce up to 104.5 million metric tons of LNG per year. In January 2022, six U.S. LNG terminals exported over 7.3 million metric tons of LNG (around 11.4 billion cubic feet per day), reaching new export records. LNG exports in March climbed to new highs, reaching 7.6 million metric tons (around 11.7 billion cubic feet per day), according to the U.S. Energy Information Administration's latest estimates.[30] That's because the sixth liquefaction unit (called a "train") at Sabine Pass was commissioned in February[31] and exports at Calcasieu Pass began in March.[32] Once these terminals ramp-up production, the U.S. will have more LNG export capacity than any other country in the world.[33]

As pressure mounts to use all available and newly constructed capacity, the public and regulators should keep a close watch on whether these plants comply with their Clean Air Act permits. These permits limit emissions of greenhouse gases and other pollutants, including nitrogen oxides and volatile organic compounds. Table 1 on the following page contains a list of the seven operating U.S. LNG terminals and breaks down their potential annual greenhouse gas emissions, as well as the totals they reported emitting to the U.S. Environmental Protection Agency's (EPA) Greenhouse Gas Reporting Program in 2020.[34]

- In total, these terminals are authorized to directly emit up to 28.3 million tons of greenhouse gases (as carbon dioxide equivalents, or CO_2e) per year.

- The most recent emissions data available from the EPA indicates that the six LNG export terminals that were fully or partially operating in 2020 reported emitting a total of 12.3 million tons of greenhouse gases that year.

- Cameron LNG was the only terminal to come close to exceeding its greenhouse gas permit limit in 2020.

- Two of the terminals listed in Table 1 plan to increase annual production by a combined total of 2.4 million metric tons. We can expect export totals and emissions to continue rising if these expansions are approved by federal agencies.

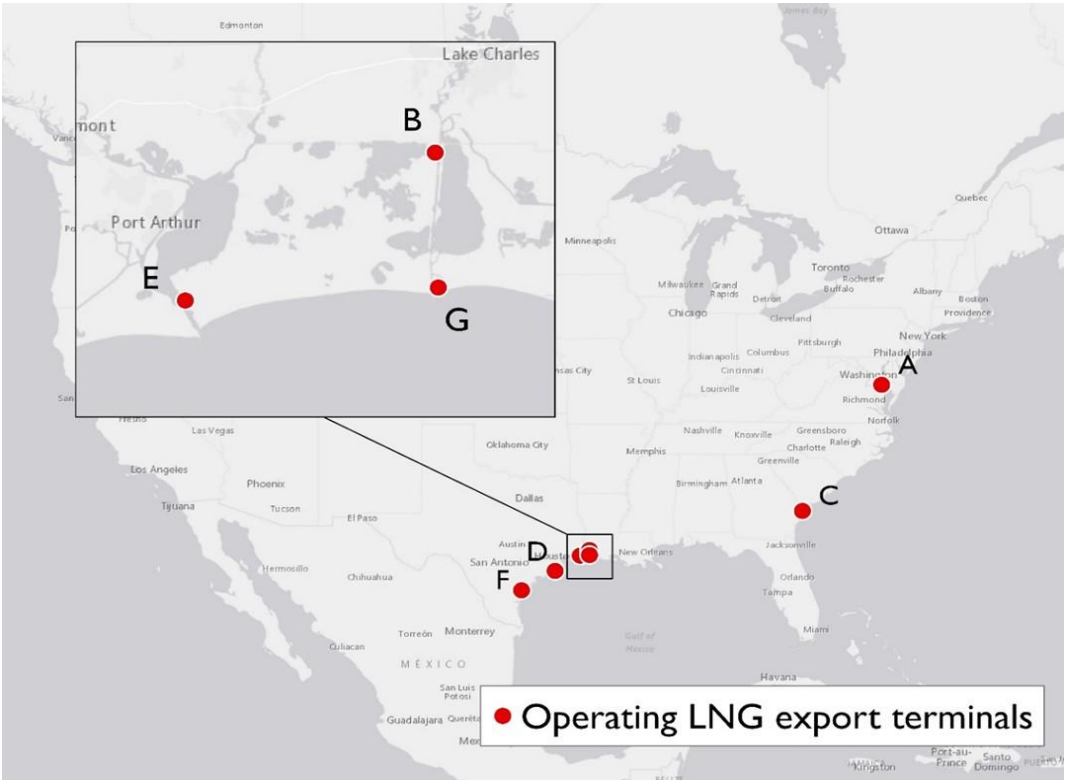
- LNG exports increased by nearly 50 percent in 2021 compared to 2020 levels. If emissions grow proportionally, we can expect reported greenhouse gas emissions in 2021 to be around 18 million tons.

TABLE 1: OPERATING LNG TERMINALS AND PERMITTED VS. REPORTED GREENHOUSE GAS EMISSIONS

Map ID	Project Name (County/Parish, State)	Exported in 2020 (million tons LNG)	GHGs Emissions (tons per year CO_2e)		Percent of Permitted Emissions
			Maximum Permitted	Reported in 2020	
A	Cove Point LNG (Calvert, MD)	4.85	2,030,998	1,240,526	61%
B	Sabine Pass LNG, Trains 1-6 (Cameron, LA) *	19.30	10,771,012	4,551,938	42%
C	Elba LNG (Chatham, GA)	0.76	396,153	89,911	23%
D	Freeport LNG, Trains 1-3 (Brazoria, TX) **	8.62	1,580,866	759,066	48%
E	Cameron LNG, Trains 1-3 (Cameron, LA)	7.96	3,958,512	3,713,957	94%
F	Corpus Christi LNG, Trains 1-3 (San Patricio, TX) *	8.24	5,538,226	1,979,734	36%
G	Calcasieu Pass LNG (Cameron, LA) **	N/A	3,970,643	TBD	TBD
	TOTAL	**49.73**	**28,246,410**	**12,335,132**	**44%**

*Note: LNG is produced using liquefaction units called "trains" by the industry. Exports in metric tons. *These plants were partially operating in 2020 and are now fully operating. **Calcasieu Pass is proposing to increase capacity to 12.4 million metric tons per year (mtpa); Freeport LNG is proposing to increase capacity to approximately 18.1 mtpa.[35] Sources: EPA; EIA; and Oil & Gas Watch.[36]*

MAP 1: LOCATIONS OF LNG TERMINALS OPERATING IN U.S. TODAY



LNG Export Terminals Under Construction

Four new LNG export terminals are currently under construction in the U.S. These projects are fully authorized under the Clean Air Act and the Natural Gas Act and are expected to increase U.S. LNG export capacity by 83.2 million metric tons per year by 2028, about an 80 percent increase over March 2022 levels. These plants are authorized to emit up to 27.3 million tons of greenhouse gases per year—nearly doubling the amount of climate-warming pollution that LNG export terminals are currently authorized to release.

Golden Pass LNG in Texas began construction in early 2019 and is expected to be partially operational by 2024.[37] Port Arthur LNG, also in Texas, began construction in January of 2020, with its first two liquefaction units expected to be completed by 2025. Sempra Energy, the company behind the project, also managed to sign three supply deals with European buyers in May for a combined total of 5.25 million metric tons per year from the Port Arthur and Cameron LNG terminals.[38]

Tellurian broke ground on the Driftwood LNG terminal in Calcasieu Parish, Louisiana this March. Encouraged by high gas prices, the company said it had sufficient financing in place to begin construction on the first phase of the project, without having reached a final investment decision.[39] Tellurian plans to provide all the feedgas for this project itself, largely from Louisiana's Haynesville shale formation, and has FERC approval to build one pipeline. Another FERC approval is expected in late 2022.

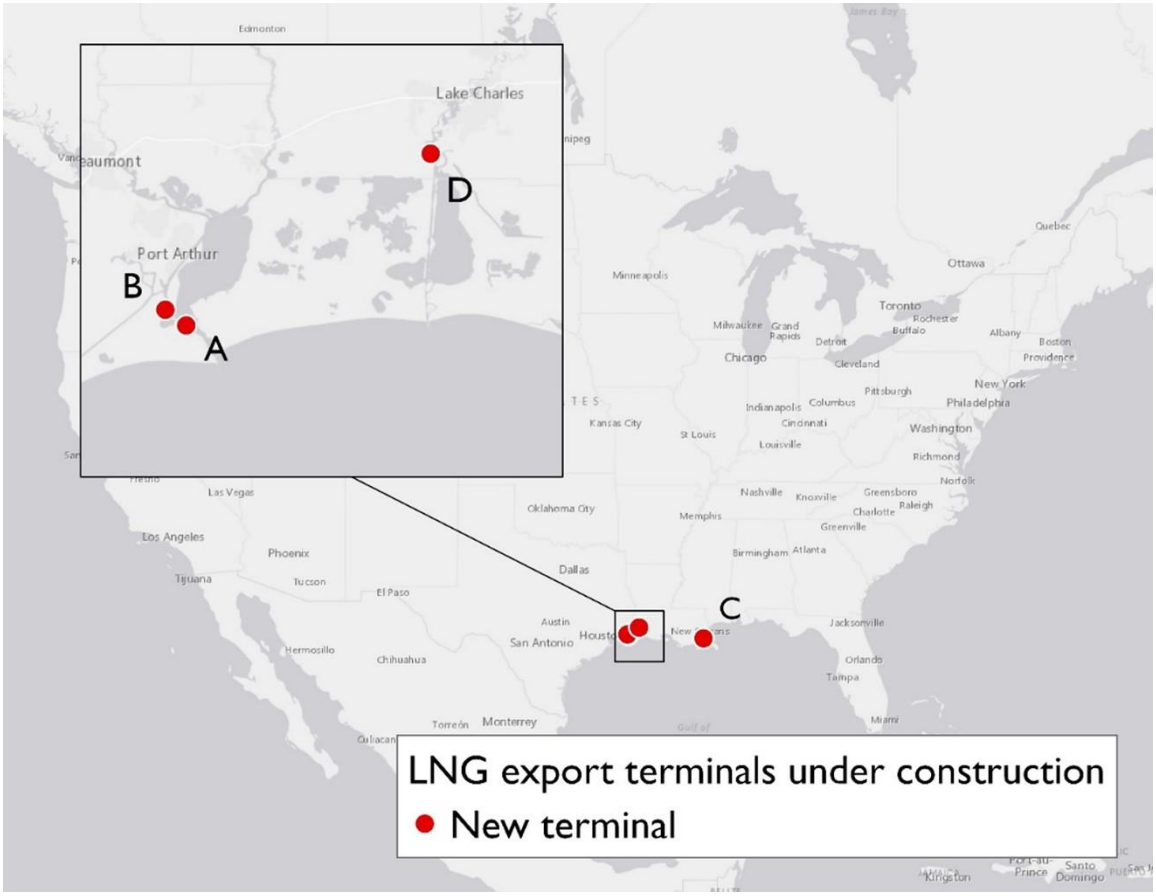
Most recently, Venture Global broke ground on the Plaquemines LNG terminal in Plaquemines Parish, Louisiana after reaching a final investment decision in late May. The company, which is also developing the CP2 and Delta LNG terminals, has managed to broker five supply deals since March 2022, as the Russian invasion of Ukraine has contributed to rising global demand for LNG, especially in Europe.

TABLE 2: LNG EXPORT TERMINALS UNDER CONSTRUCTION

Map ID	Project Name (County/Parish, State)	Capacity (million metric tons per year)	Permitted GHG Emissions (tons per year CO_2e)	Expected Operating Date
A	Golden Pass LNG (Jefferson, TX)	18.1	4,940,072	2024/2026
B	Port Arthur LNG - Trains 1 & 2 (Jefferson, TX)	13.5	4,659,930	2025
C	Plaquemines LNG (Plaquemines, LA) *	24.0	8,144,463	2025
D	Driftwood LNG (Calcasieu, LA)	27.6	9,513,442	2026/2028
	TOTAL	**83.2**	**27,257,907**	

*Note: LNG is produced using liquefaction units called "trains." Capacity figures represent peak liquefaction capacity, or the maximum amount of LNG that can be produced at the facility in a full calendar year. *Plaquemines LNG (CP22-92) is proposing to increase maximum liquefaction capacity to 27.2 mtpa. Source: Oil & Gas Watch (May 31, 2022)*[40]

MAP 2: LNG TERMINALS UNDER CONSTRUCTION



Additional LNG Terminals Authorized to Begin Construction

Another six proposed new LNG export terminals and three expansion projects have received their regulatory approvals to begin construction under the Clean Air Act and the Natural Gas Act, but the developers still haven't started construction. Nearly all of these are slated for Texas or Louisiana, with one in Florida. They could add over 97 million metric tons of LNG capacity and emit up to 25.6 million tons of greenhouse gases per year.

New or expanding sources of air pollution must obtain a permit under the federal Clean Air Act before they can begin construction. These permits also set emission limits and require companies to install pollution controls. Most LNG terminals must also obtain a Certificate of Public Necessity from the FERC before beginning construction. The process for obtaining these permits offers communities and the public an opportunity to weigh in before new infrastructure goes into the ground.

Federal rules require construction to begin within a reasonable time (usually three years) after Clean Air Act construction permits are issued, but project developers frequently ask to extend their construction deadline. Several of the projects listed in Table 3 have pending permit extensions, and only one – the Corpus Christi Stage III project – is likely to move forward by the end of this year.[41]

Owners of the proposed Rio Grande LNG Terminal in Cameron County, Texas, and the Lake Charles LNG Export Terminal in Calcasieu Parish, Louisiana, were both issued permit extensions in March 2022, followed by Corpus Christi LNG in late April. The Freeport LNG Train 4 project, which was first proposed in 2017, has an application pending before the FERC that, if approved, would extend the deadline to complete project to August 1, 2028.

Although projects required to obtain air pollution control permits are not eligible for permit renewals, the companies behind the Magnolia and Delfin LNG terminals and the Cameron LNG Expansion Project have also been granted multiple permit extensions by state agencies. All have applied to modify or renew their state-issued permits,[42] which could effectively buy them an extra 18 months to begin construction on projects that have already been delayed by nearly six years.

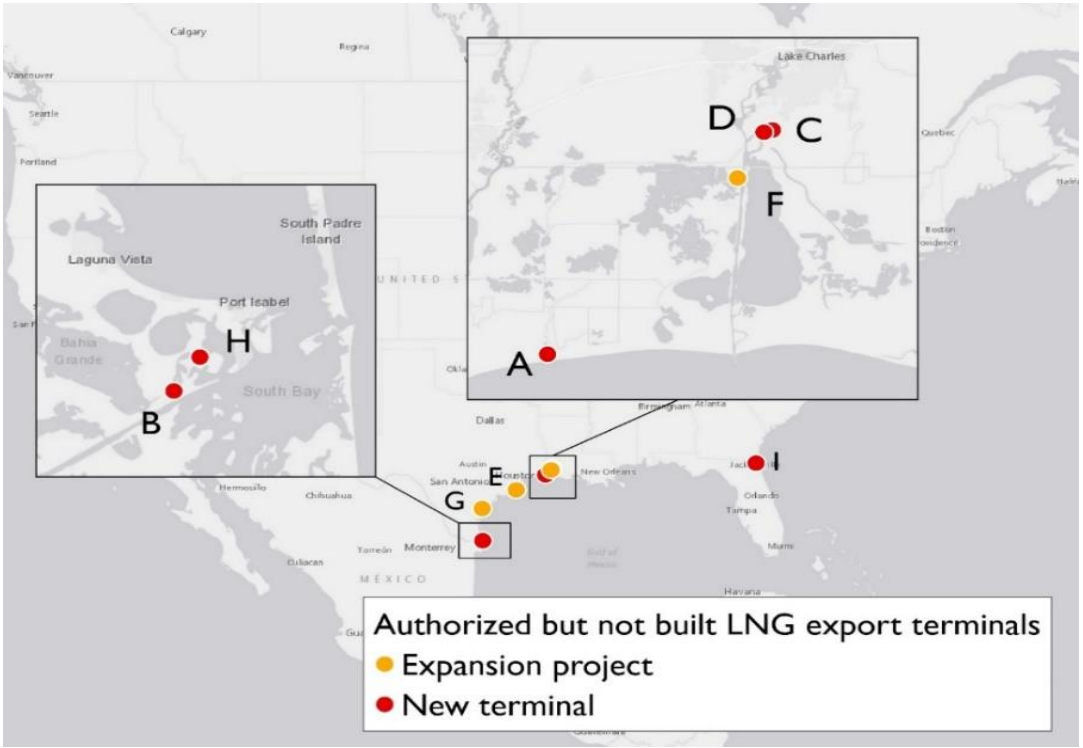
Sempra Energy also has an application pending before the FERC to modify the Cameron LNG Expansion Project, which was originally designed to consist of two liquefaction units (Trains 4 & 5) with the capacity to process 10 million metric tons of LNG per year. Now Sempra is proposing to remove Train 5 and reduce capacity to 7 million metric tons per year, while "enhancing" Train 4 and providing access to carbon capture and sequestration facilities "that may be developed in the region in the future."[43]

TABLE 3: AUTHORIZED LNG PROJECTS, CONSTRUCTION NOT STARTED

Map ID	Project Name (County/Parish, State)	Capacity (million metric tons per year)	Permitted GHG Emissions (tons per year CO_2e)	Deadline to Begin Construction	Expected Operating Date
A	Delfin LNG (Cameron, LA)*	13.0	5,302,396	7/18/2021	2023
B	Rio Grande LNG (Cameron, TX)	27.0	6,425,400	11/13/2023	2024
C	Lake Charles LNG (Calcasieu, LA)	16.5	4,321,253	9/3/2023	2025
D	Magnolia LNG (Calcasieu, LA)	8.8	2,459,715	9/21/2020	2026
E	Freeport LNG, Train 4 Project (Brazoria, TX) **	5.0	487,897		2026
F	Cameron LNG, Trains 4 & 5 (Cameron, LA) ***	10.0	5,071,105	1/24/2022	2026
G	Corpus Christi LNG, Stage 3 (San Patricio, TX)	11.5	900,845	12/28/2023	2027
H	Texas LNG Terminal (Cameron, TX)	4.5	604,087	5/12/2023	2027
I	Eagle Jacksonville LNG (Duval, FL)	1.0	71,852		2024/2025
	TOTAL	**97.2**	**25,644,550**		

** Potential GHG emissions from the Delfin LNG include both offshore and onshore facility; deadline to begin construction reflects the onshore facility. ** Freeport LNG has an application pending before FERC that would extend the deadline to complete Train 4 project to August 1, 2028. *** Cameron LNG has an application pending that could lower emissions.[44] Source: Oil & Gas Watch (May 31, 2022)*

MAP 3: APPROVED LNG PROJECTS NOT YET UNDER CONSTRUCTION



Half of the LNG export projects approved by state regulators since 2015 have applied for permit extensions or modifications. That includes five long-delayed projects that were highlighted in EIP's October 2020 report, "Troubled Water for LNG," which are still struggling to secure the agreements and financing needed for construction. EIP's report found that several proposed LNG export projects that were issued final Clean Air Act construction permits more than three years prior had been granted multiple permit extensions by state agencies and were approaching their final permit expiration dates. That remains true today. If these projects do not begin construction by their deadlines, they will need to apply for and obtain new permits under the Clean Air Act.

LNG Export Terminals Seeking Authorization to Begin Construction

Another nine new LNG export terminals and three expansion projects are seeking authorization to construct under the Clean Air Act, Natural Gas Act, or Deepwater Port Act. Six of these new projects are planned for Louisiana, and one each in Pennsylvania, New Jersey, Florida, Mississippi, Texas, and Alaska. They would add approximately 130 million metric tons per year of liquefaction capacity and 37.8 million tons of greenhouse gas emissions per year.

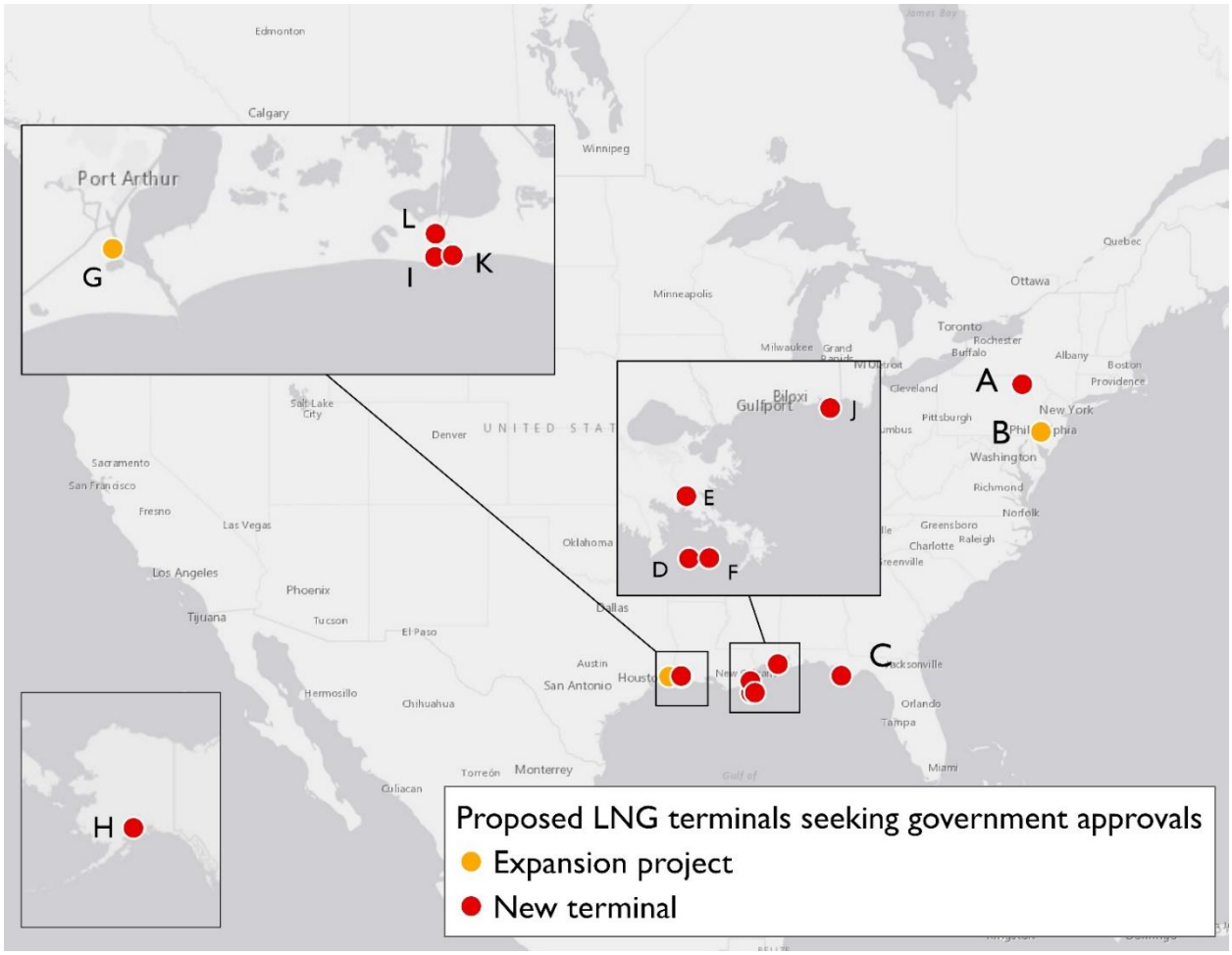
On March 31, 2022, New Fortress Energy announced that it had made a final investment decision and applied for approval to export 2.8 million metric tons per year of LNG and build a new deepwater LNG export terminal off the coast of Louisiana, with an expected operation date in early 2023.[45] This is the first new LNG export facility announced since the start of Russia's war in Ukraine and is being pitched as a 'fast' way to meet the U.S. commitment to increase LNG exports to the European Union. Other proposed offshore LNG export terminals include West Delta LNG and Delfin LNG.

TABLE 4: PROPOSED LNG PROJECTS SEEKING PERMITS TO BEGIN CONSTRUCTION

Map ID	Project Name (County/Parish, State)	Capacity (million metric tons per year)	Permitted GHG Emissions (tons per year CO_2e)	Approvals Still Needed	Expected Operating Date
A	Bradford County LNG (Bradford, PA)	***	1,107,679	NGA	2022
B	Gibbstown Logistics Center - Dock 2 Expansion Project (Gloucester, NJ)	2.4	TBD	CAA,** NGA	2022
C	Nopetro LNG (Port St Joe, FL)	0.08	TBD	CAA**	2022
D	New Fortress Louisiana FLNG Terminal (Jefferson, LA)	2.8	1,506,900	DWPA, CAA**	2023
E	Delta LNG (Plaquemines, LA)	24.0	7,771,098	NGA, CAA	2024
F	West Delta LNG (Plaquemines, LA)	6.1	1,041,670	DWPA, CAA**	2024
G	Port Arthur LNG - Trains 3 & 4 (Jefferson, TX)	13.5	3,081,270	NGA, CAA*	2025
H	Alaska LNG (Kenai Peninsula, AK)	20.0	8,572,968	CAA*	2025
I	Commonwealth LNG (Cameron, LA)	9.5	3,535,115	NGA, CAA*	2025
J	Gulf LNG (Jackson, MS)	10.8	2,885,787	CAA	2025
K	CP2 LNG (Cameron, LA)	28.0	8,253,829	NGA, CAA**	2026/2027
L	G2 LNG (Cameron, LA)	13.0	TBD	NGA,** CAA**	2027
	TOTAL	**130.3**	**37,756,316**		

*Note: LNG is produced using liquefaction units called "trains." NGA = National Gas Act; CAA = Clean Air Act; DWPA = Deepwater Port Act. * Indicates a draft permit has been issued. ** Indicates that the company still needs to apply for a permit. ***LNG produced at the Bradford County facility would be transported by truck and rail to the Gibbstown Logistics Center in New Jersey, where it would be loaded onto ships and exported overseas. Source for table and map: Oil & Gas Watch and FERC authorizations as of May 31, 2022.*[46]

MAP 4: PROPOSED LNG PROJECTS SEEKING FEDERAL OR STATE PERMITS



LNG and Carbon Sequestration

In recent years, there has been a swift uptick in the number of proposed "carbon capture and sequestration" projects announced to allegedly mitigate the carbon emissions from LNG terminals. Many of these projects involve pumping carbon dioxide underground, a largely untested and questionable technique that has never been demonstrated to work with LNG. Federal subsidies and tax credits could encourage sequestration projects. But their potential success remains uncertain for technical reasons and are unlikely to make a significant dent in reducing climate impacts, even if they do move forward.

Sempra is one of many LNG companies that have announced plans to incorporate carbon sequestration into their projects. NextDecade has an application pending before the FERC that, if approved, would amend their initial Natural Gas Act authorization and incorporate new carbon sequestration technologies that would sequester at least 90 percent of the carbon dioxide produced at the proposed Rio Grande LNG Terminal by pumping the greenhouse

gas into the ground.[47] Venture Global announced plans in May 2021 for carbon capture to be developed in connection with the Calcasieu Pass LNG facility and the proposed Plaquemines and CP2 LNG terminals, both in Louisiana. Together, these projects could theoretically sequester one million tons of carbon per year.[48] Freeport LNG announced plans for a carbon sequestration project in Texas late last year and anticipates completion in 2024.[49] The announced G2 LNG Terminal in Louisiana would, according to the company, capture four million tons of greenhouse gases per year.

Even if these projects capture the promised amounts of carbon, and there are compelling reasons to doubt they will, their cumulative capture rate would be less than a fifth of the LNG sector's projected emissions.

Conclusion

The wave of LNG expansion and construction projects underway or in the planning stages in the U.S., spurred in part by high natural gas prices and the Russian invasion of Ukraine, could have a significant impact on the global climate. The 25 new projects highlighted in this report could release more than 90 million tons of greenhouse gases per year – as much as 18 million cars running for a year. And that total does not even include the additional emissions from drilling or hydraulic fracturing, or the eventual burning of the gas downstream in businesses and homes, which would magnify the harm by several fold. Although some companies have proposed carbon capture technology, this technology is untested and could pose major environmental risks. Because of these potential dangers, government agencies now proposing to speed-up environmental approvals for LNG should slow down and keep a close watch on the pollution caused by the industry, including whether these LNG plants comply with the emission limits in their federal Clean Air Act permits.

Notes and References

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[2] U.S. Energy Information Administration, "Liquefied U.S. Natural Gas Exports" database. Accessed May 27, 2022. Link: https://www.eia.gov/dnav/ng/hist/n9133us2M.htm. LNG conversion factors can vary depending on feed gas composition and reference conditions. (see: https://www.nrcan.gc.ca/energy/international/nacei/18057 for conversion factors from Bcf to metric tons). Mtpa = Metric tons per annum.

[3]U.S. Energy Information Administration, "Liquefied natural gas exports continue to lead growth in U.S. natural gas exports," April 20, 2022. Link: https://www.eia.gov/todayinenergy/detail.php?id=52118#:~:text=We%20expect%20annual%20U.S.%20LNG,of%20more%20exports%20to%20Mexico.

[4] Emissions estimates from LNG permits on file with state regulatory agencies catalogued in EIP's Oil & Gas Watch online database. Link: https://oilandgaswatch.org/

[5] Based on an EPA estimate that a gasoline powered passenger vehicle produces about 5 million tons of greenhouse gases per year. Link: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator#results Data on number of cars and trucks in states from U.S. Department of Transportation. Link: https://www.fhwa.dot.gov/policyinformation/statistics/2017/mv1.cfm

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[29] Assuming a baseload coal-fired power plant emits 4.35 million tons of greenhouse gases per year. For emissions factors, see: https://www.eia.gov/tools/faqs/faq.php?id=74&t=11. The number of passenger vehicles driven for one year was calculated using EPA's Greenhouse Gas Equivalencies Calculator, available at: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator.

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