

The Ammonia Buildout in the U.S.

Ammonia projects are proliferating across the United States, supported by billions of dollars in federal subsidies approved in 2021 and 2022. While ammonia has traditionally been used for fertilizer, a growing number of facilities have also been proposed to make ammonia for use as fuel or to enable the transportation and storage of hydrogen fuel.

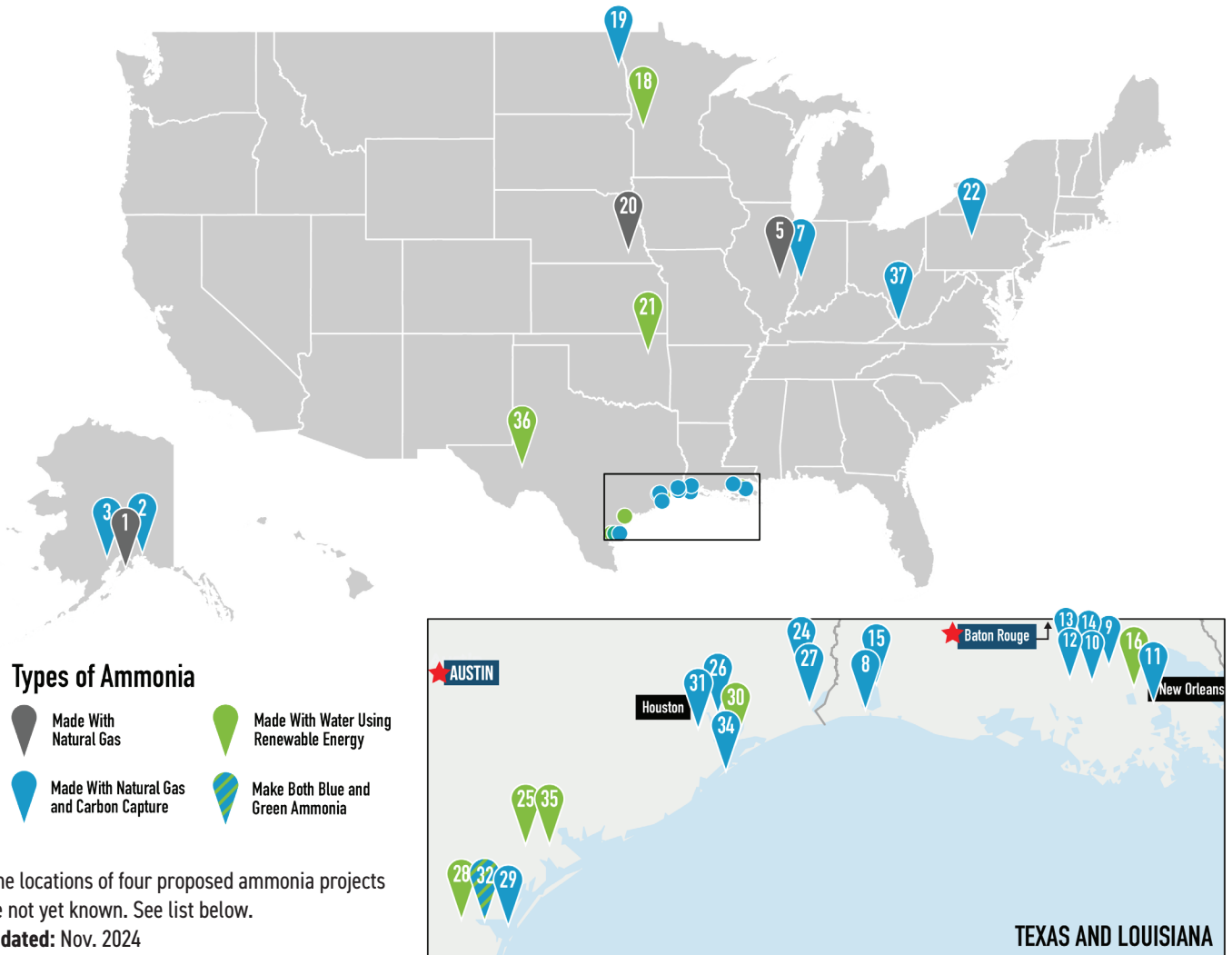
Conventional ammonia – referred to as “gray” or “blue” ammonia – consumes an enormous amount of natural gas: 33,000 cubic feet for every ton of ammonia produced, or roughly the amount of natural gas needed to power a typical American household for one year.¹ Its reliance on fossil fuels also makes ammonia production extremely emissions intensive. To reduce its carbon footprint, and with the support of tax incentives, the majority of proposed ammonia projects plan to capture at least some carbon dioxide from the production process and sequester it deep underground, producing what is referred to as “blue” ammonia. A smaller number of projects plan to use renewable electricity, deionized water, and atmospheric nitrogen to produce “green” ammonia, which does not rely on fossil fuels.

The Environmental Integrity Project is tracking the ammonia buildout on [Oil & Gas Watch](#) - a free, public database that tracks new and expanding projects in the oil, gas and petrochemical industries. As of November 2024, we have

collected data on 37 proposed ammonia projects across the U.S., which could increase annual ammonia production capacity by over 58 million metric tons over the next five years. Two thirds of these projects plan to make ammonia from fossil fuels with carbon capture, a largely unproven technology that has not shown itself to be financially viable. These projects account for nearly 70-90 percent of proposed capacity additions announced to date. Only eight projects plan to make ammonia without fossil fuels, representing seven percent of proposed capacity.

If built, these projects could nearly quadruple annual ammonia production capacity in the U.S., from 21 million metric tons to 79 million metric tons. They could also consume nearly 2 trillion cubic feet of natural gas each year, an amount equal to about 5 percent of total U.S. natural gas production in 2023.² Without gas production increases, the demand from new ammonia plants could create more competition for natural gas with homes, businesses, and other industries and potentially raise consumer prices.

The developers of many of these projects say they plan to make ammonia so it can be used as fuel or as a carrier for hydrogen, but it’s not clear if that market will materialize. The ammonia from these plants can also be sold for use as fertilizer.



*The locations of four proposed ammonia projects are not yet known. See list below.

Updated: Nov. 2024

Proposed Ammonia Projects

#	Company	Facility Name	Location	Permit Status	Classification	Planned Operating Date	Planned Ammonia Capacity Increase (1,000 metric tons per year)	Potential GHG Emissions (tons CO2e per year)	Potential Emission of Criteria Air Pollutants (tons per year)
1	Nutrien	Nutrien Kenai Nitrogen Operations	Kenai Peninsula Borough, AK	Air Permit Issued, Draft Water Permit	Restart	2027	630	2,197,970	1,284.5
2	Grannus LLC	Grannus Alaska Blue Ammonia Plant & Offshore Terminal	Port MacKenzie, AK	Awaiting Permit Applications	New	TBD	TBD	-	-
3	Mitsubishi, Toyo Engineering Corp., Hilcorp, Alaska Gasline Development Corp.	Cook Inlet Blue Hydrogen and Ammonia Hub	Cook Inlet, AK	Awaiting Permit Applications	New	TBD	TBD	-	-
4	Grannus LLC	Grannus Blue Ammonia and Hydrogen Project	TBD, CA	Awaiting Permit Applications	New	2027	150	-	-
5	Cronus Chemicals	Cronus Ammonia Plant	Douglas County, IL	Air Permit Issued, Draft Water Permit	New	2025	1,106	2,078,369	386
6	Midwest Fertilizer	Posey County Midwest Fertilizer Plant	Posey County, IN	Air Permit Issued, Awaiting Water Permit Application	New	2025	591	1,615,044	993.3
7	Wabash Valley Resources	Wabash Gasification Plant	Vigo County, IN	Air Permit Issued, Draft Water Permit	New	2027	595	1,153,657	476.7
8	G2 Net-Zero LNG LLC	G2 Net-Zero Energy Complex	Cameron Parish, LA	Awaiting Permit Applications	New	2025	TBD	-	-
9	Air Products	Air Products Darrow Blue Energy Facility	Ascension Parish, LA	Draft Air Permit, Awaiting Water Permit Application	New	2026	TBD	Unknown	276.2
10	Clean Hydrogen Works, Mitsui, Hafnia, Denbury (Exxon)	Ascension Clean Energy Facility	Ascension Parish, LA	Air Permit Pending, Draft Water Permit	New	2027	7,900	399,633	568
11	St. Charles Clean Fuels LLC, Sustainable Fuels Group, Copenhagen Infrastructure Partners	St. Rose Blue Ammonia Facility	St. Charles Parish, LA	Draft Air Permit, Awaiting Water Permit Application	New	2027	2,920	154,896	190.9
12	CF Industries, Mitsui	Blue Point Complex	Ascension Parish, LA	Air Permit Pending, Awaiting Water Permit Application	New	2027	1,570	1,631,806	558.6
13	CF Industries, Lotte Chemical	CF Industries/ Lotte Gulf Coast Blue Ammonia Plant	Ascension Parish, LA	Awaiting Permit Applications	New	2027	TBD	-	-



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14	CF Industries, POSCO	CF Industries/ POSCO Gulf Coast Blue Ammonia Plant	Ascension Parish, LA	Awaiting Permit Applications	New	2028	TBD	-	-
15	Proman, Mitsubishi, Idemitsu Kosan Co.	Lake Charles Blue Ammonia Plant	Calcasieu Parish, LA	Awaiting Permit Applications	New	2030	1,200	-	-
16	AmmPower Corp.	AmmPower Green Hydrogen and Ammonia Production Facility	Port of South Louisiana, LA	Awaiting Permit Applications	New	TBD	1,460	-	-
17	Uniper, LyondellBasell, Chevron, Air Liquide	Gulf Coast Hydrogen Plant	Gulf Coast, LA	Awaiting Permit Applications	New	TBD	TBD	-	-
18	Xcel Energy	Heartland Hub: Morris Fertilizer Plant	Stevens County, MN	Awaiting Permit Applications	New	TBD	TBD	-	-
19	Northern Plains Nitrogen	Grand Forks Fertilizer Plant	Grand Forks County, ND	Awaiting Permit Applications	New	TBD	TBD	-	-
20	Monolith Materials	Monolith Olive Creek Plant	Lancaster County, NE	Air Permit Issued, Water Permit Issued	Expansion	2025	340	115,176	69
21	Terra Nitrogen LP	Verdigris Nitrogen Plant	Rogers County, OK	Awaiting Permit Applications	Expansion	TBD	100	-	-
22	KeyState Natural Gas Synthesis Energy	ARCH2 KeyState Natural Gas Synthesis Plant	Clinton County, PA	Awaiting Permit Applications	New	2027/2028	TBD	-	-
23	Yara, BASF	Yara/BASF Gulf Coast Blue Ammonia Plant	Gulf Coast, TBD	Awaiting Permit Applications	New	TBD	1,400	-	-
24	Woodside Energy, Linde	Beaumont Clean Ammonia Complex *	Jefferson County, TX	Air Permits Issued, Draft Air Permit for Phase II, Water Permits Pending *	New	2025/2026	2,190	1,254,090	429.7
25	First Ammonia	First Ammonia Port of Victoria Green Ammonia Plant	Victoria County, TX	Air Permit Pending, Awaiting Water Permit Application	New	2025	330	Unknown	1.4
26	LSB Industries, Vopak Moda Houston LLC, Air Liquide, INPEX Corp.	Houston Ship Channel Low-Carbon Ammonia Plant	Harris County, TX	Awaiting Permit Applications	New	2027	1,100	-	-
27	8 Rivers Capital LLC	Cormorant Clean Energy Project	Jefferson County, TX	Awaiting Permit Applications	New	2027	880	-	-



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28	Avina Clean Hydrogen Inc	Nueces Green Ammonia Plant	Nueces County, TX	Draft Air Permit, Awaiting Water Permit Application	New	2027/2028	800	Unknown	39.5
29	Yara, Enbridge	Ingleside Clean Ammonia	San Patricio County, TX	Draft Air Permit, Awaiting Water Permit Application	New	2028	2,920	3,376,117	365.3
30	Texas Green Fuels LLC	Galveston Bay Clean Fuels Export Complex	Galveston County, TX	Awaiting Permit Applications	New	2028	TBD	-	-
31	ExxonMobil Chemical	ExxonMobil Baytown Chemical Plant	Harris County, TX	Air Permit Pending, Awaiting Water Permit Application	Expansion	2029	1,000	Unknown	-116.7
32	Mitsubishi, Lotte Chemical, RWE	Port of Corpus Christi Blue and Green Ammonia Facility	Nueces County, TX	Awaiting Permit Applications	New	2030	10,000	-	-
33	Ten08 Energy	Ten08 Clean Ammonia Plant	Gulf Coast, TX	Awaiting Permit Applications	New	2029/2030	1,400	-	-
34	Blue Bayou Ammonia LLC	Blue Bayou Ammonia Plant	Galveston County, TX	Awaiting Permit Applications	New	TBD	3,000	-	-
35	ACME Greentech Ventures	ACME Port of Victoria Green Ammonia Plant	Victoria County, TX	Awaiting Permit Applications	New	TBD	1,200	-	-
36	MMEX Resources Corporation	Trans Permian H2 Hub: MMEX Green Hydrogen to Green Ammonia Project	Pecos County, TX	Awaiting Permit Applications	New	TBD	209	-	-
37	TransGas Development Systems LLC	Adams Fork Energy	Mingo County, WV	Air Permit Issued, Awaiting Water Permit Application	New	2027	13,140	1,821	67.3

Note: Air permits refer to Clean Air Act New Source Review (NSR) pre-construction permits. Water permits refer to Clean Water Act National Pollutant Discharge Elimination System (NPDES) permits. Permit status only applies to the project listed; facilities may have other active or pending permits. Emissions are sourced from permit documents; blanks indicate that a company has not applied for an air permit; unknowns indicate that potential GHG emission estimates were not provided in permit documents. Data is current as of November 2024.

*Linde will supply hydrogen to Woodside Energy's ammonia plant and is being built and permitted separately. As of November 2024, Linde's hydrogen plant had received an initial air construction permit, but its water permit application is still pending. Woodside's ammonia plant is being built in two phases. Phase I is under construction and is expected to begin operating in 2025; Phase II will double capacity and is expected to begin operating in 2026. A draft air permit for construction of Phase II has been proposed, but construction has not begun. Potential emissions are the sum of both projects.

Endnotes

¹ See: [USDA](#) and [EPA](#)

² Capacity is unknown for 11 proposed projects. According to the U.S. Energy Information Administration, dry gas production totaled 37,803,268 million cubic feet in 2023.



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