

Ammonia Build-Out: Recipe for Risks

OVERVIEW

Government agencies have been awarding financial incentives to private companies to build ammonia production plants that may fail to achieve robust economic benefits for host communities. IEEFA's five-part report shows why ammonia production would likely have a limited impact on jobs and high construction and operating costs, why energy markets for ammonia will not likely be robust, and why such projects should be heavily scrutinized given the potential risks to host communities. This factsheet focuses on rising costs.

RISING COSTS, MARKET RISKS

Governments faced with requests for financial incentives to boost ammonia production projects should consider carefully the suitability of new ammonia production as an economic development investment. Several factors, individually or collectively, pose financial risks for ammonia production projects.

Natural gas prices. Most U.S. ammonia manufacturers use natural gas as the feedstock and as fuel for onsite power. The operational expense of procuring U.S. natural gas for ammonia production has recently been low, but price swings over the last five years have doubled the range of variation compared to the previous decade, before much of the liquefied natural gas (LNG) export terminals were built.

Volatility Comparison of Pre-LNG Export (2011-2015), LNG Exports Ramping (2016-2020), and Last 5 Years (2021-2025)

Henry Hub Spot Prices (Monthly Averages)

	Average (\$/mmBtu)	Standard Deviation	Coefficient of Variation	Skew	Kurtosis
2011-2015	\$3.50	\$0.83	23.7%	0.234	0.019
2016-2020	\$2.65	\$0.56	21.1%	0.232	0.254
2021-2025	\$3.71	\$1.76	47.4%	1.257	1.004

Source: Federal Reserve Economic Data (FRED), Federal Reserve Bank of St. Louis

A greater influence by extreme outliers on natural gas prices lately has resulted in lower predictability and higher exposure to larger price swings. Historically, sustained natural gas price spikes have resulted in lowered ammonia production and, in some cases, plant closures.

Uncertainty of federal subsidies. The tax credits provided by the Inflation Reduction Act of 2022 for "low-carbon" hydrogen and co-products such as ammonia, were expected

to make them more competitive. Slow roll-out of rules to implement the credits, problems with permitting carbon injection wells, and difficulties obtaining binding long-term off-take contracts have hampered industry efforts to get announced projects to Final Investment Decision (FID).¹

Capital construction costs. Industrial construction input costs, in general, have risen 41.9% since 2020, based on figures that do not yet reflect tariffs placed in 2025 on key inputs such as iron, steel, aluminum and copper.² Also, construction labor costs have risen 46% over the past decade, mostly due to inflation.³

Oversupply of the market. Overbuilding of ammonia capacity can place downward pressure on prices. CF Industries, a major producer of ammonia, reported to the U.S. Securities and Exchange Commission that, "in the two-year period ended December 31, 2017, additional production capacity came online, and the average selling price for our products declined 34%, from \$314 per ton in 2015 to \$207 per ton in 2017."⁴ The planned new capacity will face limited expansion of the domestic market and competition risks in the international market

EXAMPLES OF SETBACKS

In 2022, Nutrien announced a plan to build what it termed "the world's largest clean ammonia production facility" in Geismar, Louisiana, at a projected cost of \$2 billion.⁵ But the company suspended work on the project in 2023, explaining the estimated capital costs had risen by 15% to 20% and citing "uncertainty on the timing of emerging uses" for low-carbon ammonia."

BASF terminated in August 2025 a multi-billion-



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dollar plan with Yara Clean Ammonia to build a large blue ammonia plant in the Gulf Coast. Stocks Today reported the project was “shelved due to unfavorable market conditions and economic uncertainties.”⁶

LSB Industries, jointly collaborating with three other companies, placed the Channel Low-Carbon Ammonia Plant in La Porte, Texas on pause in 2025. CEO Mark Behrman attributed the decision to “the impact of U.S. tariff-related price increases and other global economic uncertainties on costs, coupled with a slower-than-anticipated ramp-up of low carbon ammonia demand.”⁷



CONCLUSION

Based on the concerns raised in the five parts of IEEFA's report, *Ammonia Build-Out: Recipe for Risks*, any plan to grant public monies and tax benefits to ammonia production projects should be subject to rigorous scrutiny and robust public discussion. See Factsheets 1, 3, 4, and 5 on the [IEEFA website](https://www.ieefa.org).

¹ GasWorld. ExxonMobil ‘pauses major blue hydrogen project’ amid offtake struggles. November 24, 2025. Also see: Decarbonfuse. Exxon Baytown FID prospects increasingly slim for 2025. October 16, 2025.

² See Associated Builders and Contractors. Construction Materials Prices Continue to Rise, Up 3.5% Since Last September. November 2025 (Table: Producer Price Index September 2025).

³ Adjusted for inflation, the increase amounts to 7%, comparing hourly wage in September 2015 of \$37.35 (as adjusted for inflation from \$27.35) vs. \$40.08 August 2025. See Construction Coverage. U.S. construction industry facts, stats & trends. Last updated November 17, 2025.

⁴ CF Industries Form 10K for 2024 (a form submitted annually to the U.S. Securities and Exchange Commission), p. 12.

⁵ Nutrien, Ltd. Press Release: Nutrien announces intention to build world’s largest clean ammonia production facility. May 18, 2022.

⁶ Stocks Today. BASF halts multi-billion-dollar US ammonia project in strategic shift. August 29, 2025.

⁷ LSB Industries. LSB Industries, Inc. reports operating results for the 2025 First Quarter. April 29, 2025.

