FOR IMMEDIATE RELEASE
March 3, 2025

Contact:
Ben Hunkler, Communications Manager
ben@ohiorivervalleyinstitute.org | (740) 963-4458

Layers of Uncertainty Cloud New Ammonia Markets,
Casting Shadow over Planned US Buildout

Report finds that more than 37 proposed ammonia production facilities face unclear future

JOHNSTOWN, Pa. — Layers of uncertainty around new ammonia markets and the ability of new projects to scale production cast doubt over the massive ammonia buildout planned for the US, according to a new report from the Ohio River Valley Institute.

A surge of more than 37 proposed projects across the country, fueled by tax credits earmarked in the Inflation Reduction Act, stands to increase domestic ammonia production by over 350% if projects are built and operated at full capacity.

But bullish demand growth forecasts rely on new markets and technologies that remain "nascent and dubious," explained **report author and ORVI Research Fellow Zane Gustafson.**

"Soaring projections of ammonia demand growth in emerging markets for maritime fuel and as a carrier for hydrogen transportation are likely overinflated and, at the least, could take many years to materialize."

Traditional ammonia production is highly carbon-intensive, yielding 2.35 metric tons of CO_2 per ton of ammonia. To cut some emissions from methane-derived production processes, nearly 90% of anticipated new ammonia production capacity would employ costly carbon capture and storage technology, which has consistently failed to meet capture targets. If capture and sequestration fails to work as advertised, these "blue" ammonia facilities could annually emit upwards of 129 million metric tons of carbon dioxide.

"Green" ammonia, which accounts for 7.5% of planned production growth, can be made from water with zero emissions if derived from renewables-powered "green" hydrogen. But the US electric grid, already strained by emerging demands from other sectors, lacks the renewable capacity to meet the anticipated 44 million MWh annual power demand of proposed green ammonia facilities.

“Growth of low-carbon ammonia supply will be bottlenecked by the speed and scale at which blue and green ammonia production facilities—and associated blue and green hydrogen production facilities—can be built and made operational,” said Gustafson.

In Appalachia, federal tax credits for carbon sequestration and hydrogen production have motivated proposals for two projects that would explode the region’s ammonia production capacity: TransGas’ Adams Fork Energy project in Mingo County, WV and the KeyState Natural Gas Synthesis Plant in Clinton County, PA, both of which would produce methane-based hydrogen and ammonia with carbon capture technology.

“From risky carbon transportation and storage infrastructure to the likelihood of expanded fracking activity, which has been linked time and again to asthma, cancer, and other serious health impacts, the Adams Fork Energy project puts West Virginia families in harm’s way,” said **Mariah Clay, Southern WV Coordinator with the West Virginia Rivers Coalition.** “Local residents’ concerns about safety risks and emergency response procedures for what could become the largest ammonia-producing facility in the nation remain largely unanswered.”

The report recommends skepticism of the carbon-intensity of “low-carbon” ammonia and judicious allocation of federal tax incentives for ammonia production, suggesting that ammonia and hydrogen only be used where no cost-effective decarbonization alternative exists.

View and download the report at https://ohiorivervalleyinstitute.org/the-uncertain-ammonia-industry-present-future/.

###