

Clean Hydrogen in Louisiana



CLEAN AIR
TASK FORCE

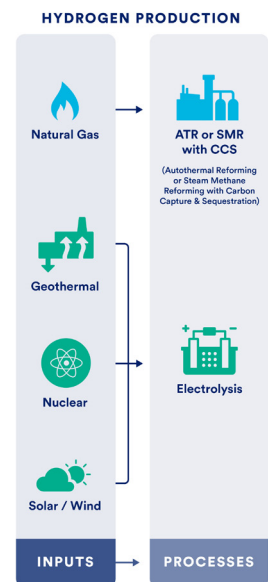
Why Louisiana?

Louisiana is a national leader in hydrogen production and consumption with existing use in oil refining, chemical manufacturing, and fertilizer production. The state's industrial clusters, skilled workforce, extensive energy infrastructure, and strong position in global chemical markets give Louisiana a unique competitive advantage in producing clean hydrogen at scale. According to Louisiana Economic Development, these strengths have attracted over **\$20 billion in private investment that has potential to generate over 10,000 jobs¹**, enabling the state to remain competitive as demand for cleaner industrial fuels and feedstocks grow.

What is Hydrogen?

Hydrogen is a fuel and industrial feedstock widely used in Louisiana for decades, particularly in the chemical and refining industries. It is a core input in processes essential to the state's economy and energy system.

Conventional and Clean Hydrogen: Conventional hydrogen production is energy and emissions intensive, produced through a process that converts a fossil fuel such as natural gas to hydrogen and carbon dioxide using steam. "Clean" hydrogen refers to hydrogen produced through methods with reduced emissions intensity using the two primary production pathways as shown in the graphic to the right and detailed below. As global markets and large industrial customers increasingly prefer lower-emissions products, clean hydrogen allows existing industries to remain competitive while continuing to operate at scale.



How Clean Hydrogen is Made

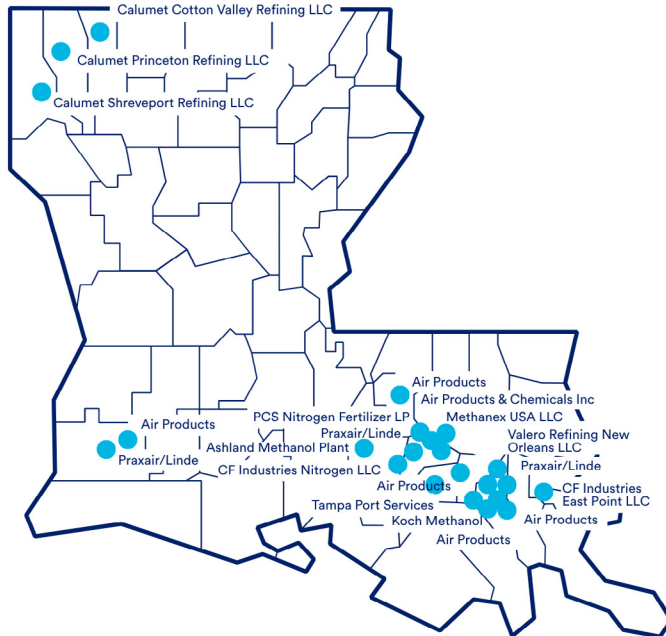
- 1 Natural gas + carbon capture and sequestration (CCS):** Hydrogen produced from natural gas using the conventional industrial process—steam methane reforming (SMR)—can reduce its emissions intensity through the use of CCS. A newer approach, called autothermal reforming (ATR), is designed to concentrate carbon dioxide and increase efficiencies.²
- 2 Electricity + water:** Hydrogen produced using electricity to split water into hydrogen and oxygen is referred to as electrolytic hydrogen. This hydrogen is considered clean when the electricity comes from low- or zero-emission sources.

Louisiana Clean Hydrogen Future

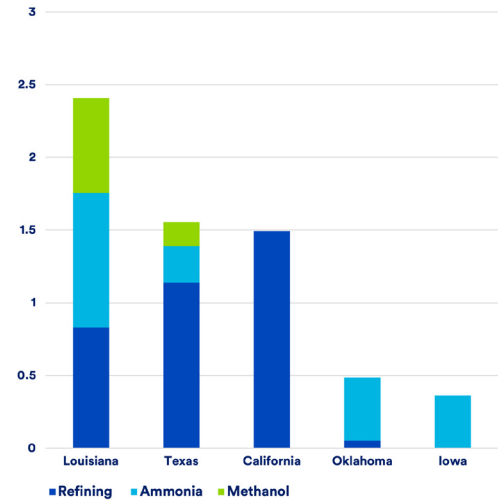
Created by HCR 64 in the 2024 Legislative Session, the Louisiana Clean Hydrogen Task Force brought together state agencies, legislators, hydrogen companies and developers, and other stakeholder voices to identify tools to grow Louisiana's clean hydrogen economy. On December 1, 2025, the task force shared its report with the governor and legislature, recommending practical steps to accelerate proposed clean hydrogen projects through state leadership, economic development, and regulatory alignment.

¹ The job estimate is based on the Louisiana Economic Development's assessment, found here: <https://www.opportunitylouisiana.gov/key-industry/energy/energy-diversity/hydrogen>.
² *Autothermal reforming (ATR)* is a less common form of methane reforming.

Louisiana hosts a dense concentration of large industrial facilities and infrastructure that can enable hydrogen production at scale, supported by the state's long-standing industrial base, infrastructure, and skilled workforce. **CATF found the state produces almost 2.5 million metric tons (MMT) of dedicated hydrogen annually at the sites shown on the map.** Dedicated hydrogen production refers to facilities whose primary purpose is production of hydrogen, as opposed to the byproduct of industrial processes. This production base is a major economic development engine that maintains existing and attracts future uses of hydrogen.



Top 5 U.S. States by Hydrogen Consumption (MMT/yr)

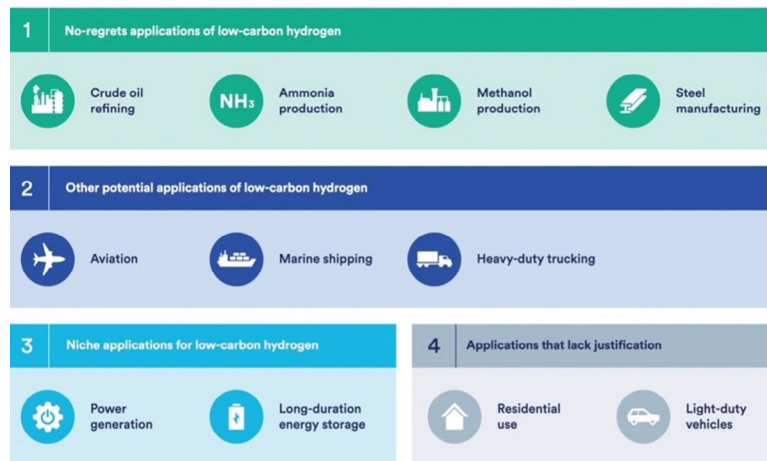


Existing and Future Hydrogen Uses

Louisiana is the biggest consumer of conventional hydrogen among U.S. states, primarily for petroleum refining, ammonia production including for fertilizers, and methanol production. Louisiana is also ranked first nationally in dedicated hydrogen production, accounting for almost 30% of the country's total production. The state's dominance in conventional hydrogen production and consumption alongside its industrial strengths set Louisiana apart to lead the next wave of clean hydrogen investment.

Clean Hydrogen in Louisiana

Because hydrogen is widely used in key industries such as petroleum refining and the production of ammonia and methanol, **the highest-value and most efficient application of clean hydrogen is the replacement of conventional hydrogen in existing processes.** Clean hydrogen can also be used in steelmaking (ex: Hyundai's proposed Louisiana Steel Mill) and transportation where technology advancements have been significant.



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