



Progress Report

Louisiana Clean Hydrogen Task Force

February 11, 2025

Prepared by:
Louisiana Department of Energy and Natural Resources

Executive Summary

This progress report is hereby submitted to the Governor of Louisiana, the House Natural Resources and Environment Committee, and the Senate Natural Resources Committee by the Clean Hydrogen Task Force (“Task Force”) in accordance with the requirements of House Concurrent Resolution No. 64 of the 2024 Regular Session. For the membership of the Task Force, please see Appendix A. The primary areas of investigation for the Task Force (as outlined in HCR No. 64) are in Appendix B. A copy of HCR No. 64 is included in Appendix C.

Background

The Task Force has convened three times: July 31, October 1, and December 3, 2024, with this progress report set for consideration at a fourth meeting (February 11, 2025). The meetings have provided high-level overviews of clean hydrogen technology, economics, and governance, guiding the Task Force’s efforts to develop legislative recommendations that align with HCR 64. The Task Force continues to evaluate strategies that:

- Asses the growing clean hydrogen economy and workforce;
- Enhance transparency in the hydrogen value chain;
- Review active and planned projects and initiatives in the state;
- Evaluate public and private policy mechanisms to incentivize clean hydrogen;
- Recommend policy strategies to accelerate the production and use;
- Analyze the impact of clean hydrogen on large emission sources; and
- Identify opportunities for and barriers to deployment.

Meetings and Discussion Topics

The first three meetings of the Clean Hydrogen Task Force have drawn a diverse group of stakeholders, including industry representatives, nongovernmental entities, developers, and government officials. Each meeting has featured a policy discussion to ensure continued progress towards final recommendations, alongside presentations from clean hydrogen developers to better understand their projects and explore how the Task Force can support them.

At the first meeting, Dr. Mark Zappi, Executive Director of the Energy Institute of Louisiana at the University of Louisiana-Lafayette, provided a comprehensive overview of clean hydrogen, covering production methods, key applications, and future opportunities for development in Louisiana. He emphasized the state’s existing infrastructure, skilled workforce, and industrial base positions Louisiana as a prime location for scaling-up clean hydrogen production.

The second meeting featured Dr. Greg Upton of the LSU Center for Energy Studies, who presented on the economic implications of hydrogen production and its integration into Louisiana’s economy. His discussion highlighted the financial viability of hydrogen projects, potential markets, and infrastructure investment challenges.

According to the Louisiana Department of Economic Development, nine clean hydrogen projects have been announced, totaling \$32 billion in capital expenditure and underscoring the significant opportunity that clean hydrogen presents for the state.

Most recently, Blake Canfield, Executive Counsel with the Department of Energy and Natural Resources (LDENR), and Brandon Frey, Executive Secretary of the Public Service Commission (LPSC) provided a legal and regulatory overview. LDENR reviewed the agency's jurisdiction over clean hydrogen as it relates to pipeline safety and underground storage, while LPSC appraised the Task Force of two recently introduced policy initiatives: the Louisiana Advanced Nuclear Competitive Edge (LANCE) report, which aims to position the state as a leader in nuclear, and Sleeved Power Purchase Agreements, a policy option that allows large customers to contract directly with renewable developers under LPSC oversight.

Additionally, each meeting has spotlighted a clean hydrogen developer and their in-state projects. The Task Force heard from Cameron Poole and Leo John Arnett with Greater New Orleans, Inc., who provided updates on the H2theFuture project, an initiative designed to decarbonize Louisiana's industrial corridor by leveraging \$60 billion of capital investment and \$10 billion in federal funding. Vee Godley of Ascension Clean Energy presented on this company's planned clean hydrogen project in Ascension Parish, which will be designed to produce 7.2 million metric tons of low-carbon ammonia annually while capturing 98% of carbon dioxide.

Each of these meetings has deepened the Task Force's understanding of clean hydrogen's economic, policy, and regulatory landscape, laying the foundation for relevant and actionable recommendations to accelerate the growth of Louisiana's clean hydrogen economy.

The broadcasts of these meetings, including all presentations received by the Task Force, are available online at the following links:

July 31, 2024:

https://house.louisiana.gov/H_Video/VideoArchivePlayer?v=house/2024/jul/0731_24_CLEANHYDROGEN

October 1, 2024:

https://house.louisiana.gov/H_Video/VideoArchivePlayer?v=house/2024/oct/1001_24_CHTF

December 3, 2024:

https://house.louisiana.gov/H_Video/VideoArchivePlayer?v=house/2024/dec/1203_24_HYDROGEN

Future Meetings

The Task Force will continue to meet at least every other month until December 2025, with additional meetings anticipated as the final report deadline approaches. Future discussions will explore key aspects of the clean hydrogen ecosystem, including production, transport, storage, and end use. The Task Force will continue to monitor federal policy developments to assess the potential impact on state-level hydrogen initiatives.

Specific Recommendations

The Task Force has only one clear recommendation to make at this time:

- Revise Louisiana's Natural Resources & Energy Act (La. R.S. 30:501, et seq.) to make it and its relevant rules (LAC 43:XI.Subpart 1) applicable to hydrogen produced from water through electrolysis. Currently, this Act and its rules apply to "any gas derived from or composed of hydrocarbons." As hydrogen created from natural gas is "derived from hydrocarbons," such production, by definition, would fall under this act. Hydrogen produced from water through electrolysis or via biomass gasification, however, would not meet this definition, hence the need for a revision to bring water- or biomass derived hydrogen under the auspices of the Act and its rules.

Points for Continued Discussion and Consideration

See Appendix B for HCR No. 64 Primary Areas of Investigation, but generally, the Task Force must:

- Clearly outline the "what" and "how" of clean hydrogen – the science of clean hydrogen, why it makes sense for Louisiana and its economic feasibility;
- Provide a clear understanding of how clean hydrogen fits into an overall state energy policy;
- Differentiate the types of clean hydrogen available, such as that derived from steam methane reforming combined with carbon capture and sequestration and that derived from water and electrolysis, and the physical/industrial requirements for production for each;
- Outline the energy and water needs for the production of clean hydrogen;
- Review the possible industrial uses for clean hydrogen and develop an understanding of the current and potential future market demand;

- Review the associated financial, environmental, and regulatory costs of hydrogen, the need for price stability, and the various markets/incentives currently existing (and projected);
- Outline clean hydrogen's connectivity with other elements of Louisiana's energy economy (CCS, natural gas, etc.);
- Assess possible clean hydrogen production hubs or corridors for development;
- Evaluate hydrogen physical infrastructure needs (in addition to energy/water needs above);
- Analyze opportunities for the buildout of an infrastructure/manufacturing support base;
- Examine workforce needs and training requirements and how these might be met through existing technical education programs;
- Review production, transportation, and storage regulatory oversight;
- Determine methods for assessing the regulatory framework and making improvements;
- Closely evaluate the findings and recommendations outlined in the December 2024 report of the Texas Hydrogen Production Policy Council and consider the appropriateness of these for possible inclusion or incorporation into the Task Force's final report; and
- Determine if there are opportunities to cooperate with Texas on a wider hydrogen management and regulatory framework for the Gulf South.

Respectfully submitted,

Honorable Joseph A. Orgeron
Chairman, Clean Hydrogen Task Force

APPENDIX A

MEMBERSHIP

**Rep. Joseph A. Orgeron, Ph.D.
(Chair)**

Designee of Chairman, House Natural
Resources & Environment Committee

Sen. Craig R. “Bob” Hensgens
Chairman, Senate Natural Resources
Committee

Neal McMillin
Designee, Secretary of Dept. of Energy
& Natural Resources

Adrie De Waal
Designee, Secretary of Dept. of
Environmental Quality

Paige Carter
Designee, Secretary of Dept. of
Economic Development

Brandon Frey, PSC Exec. Secty.
Designee, Chair of the Public Service
Commission

Erika Vazquez, RWE
Representative of the clean hydrogen
industry

Jessica Gillespie, Shell
Representative of the clean hydrogen
industry

Andrew Brignac, P.E., Entergy
Representative of regulated electric
power and distribution industry

Tommy Hebert, CLECO
Representative of regulated electric
power and distribution industry

Greg Upton, PhD, LSU
Representative of Louisiana higher
education

Mark Zappi, PhD, PE, UL-Lafayette
Representative of Louisiana higher
education

**Leo John Arnett,
Greater New Orleans, Inc.**
Representative of regional economic
development organization

**Lindsay Cooper Phillips,
Clean Air Task Force**
Representative, community interest

**Charles Sutcliffe,
National Wildlife Federation**
Representative, community interest

**Guy Cormier,
Police Jury Association of Louisiana**
Representative, community interest

APPENDIX B

PRIMARY AREAS OF INVESTIGATION (FROM HCR 64)

- (1)** Assess the growing clean hydrogen economy and workforce in the nation and in the State of Louisiana.
- (2)** Provide transparency on hydrogen production, connective infrastructure, end use, and impacts on local communities.
- (3)** Review active and planned clean hydrogen projects, policy initiatives, public and private investments, tax incentives, project permitting, state procurement, pilot projects, projected workforce needs, and regulatory structures in Louisiana.
- (4)** Assess public and private policy mechanisms to incentivize clean hydrogen specifically for high-opportunity end uses for the State of Louisiana like ammonia and chemical products, oil and gas refining, maritime fuel production, power production, and port facility operations.
- (5)** Recommend policy strategies to accelerate the production and use of clean hydrogen, including processes such as electrolysis and steam methane reforming with carbon capture. Policy recommendations may include recommendations on how to overcome market and technical barriers and accelerate progress in clean hydrogen production; scaling and use, including use of public-private partnerships or demonstration projects; financing mechanisms; incentives; or other policies.
- (6)** Assess the largest sources of emissions in Louisiana, the divergence of Louisiana's emission sources compared to other states, and the opportunity of clean hydrogen production to decarbonize sectors of the state economy, reduce emissions and improve air quality.
- (7)** Assess opportunities for and barriers to deployment of clean hydrogen in the state economy and policy environment.

APPENDIX C

HCR No. 64 OF 2024 REGULAR SESSION

2024 Regular Session
ENROLLED HOUSE CONCURRENT RESOLUTION NO. 64
BY REPRESENTATIVE ORGERON

A CONCURRENT RESOLUTION

To create and provide with respect to a Clean Hydrogen Task Force to study and make recommendations with respect to growing the clean hydrogen industry in the state, including its production, connective and storage infrastructure, and end use.

WHEREAS, Louisiana has historically been a lead energy carrier for the nation, a top energy producer, and the primary energy consumer because of our leading industrial sector; and

WHEREAS, Louisiana leads the nation in the energy transition with over one-third of total industrial investments in clean energy or emissions reductions, and as a result, employment in Louisiana's energy sector has grown and is expected to continue to grow in coming decades; and

WHEREAS, over the last five years, the state of Louisiana has announced thirty-five clean energy projects totaling \$45.6 billion in capital expenditure and these projects will create twenty-three thousand new jobs with an average salary of \$79,700; and that \$23.3 billion of the total \$45.6 billion represent investments for renewable-powered industrial projects; and

WHEREAS, Louisiana is expected to have exponential growth in demand for clean hydrogen because of economic opportunity for industries, job growth, and energy diversification; and

WHEREAS, Louisiana is already one of the largest hydrogen producers in the nation, totaling 2.8 million metric tons of hydrogen in 2020, and is equipped to be a regional and global leader of clean hydrogen production, transport, storage, and use; and

WHEREAS, hydrogen is a chemical element commonly used as a feedstock in industrial processes like oil refining, fertilizer production, petrochemical, and steelmaking; and

WHEREAS, hydrogen is an energy carrier and can store and deliver usable energy derived from a variety of sources; and WHEREAS, hydrogen can also be used as a substitute for conventional fossil fuels in some use cases with considerably lower greenhouse gas emissions at its point of use; and WHEREAS, hydrogen can be

produced using multiple methods, each with varying levels of carbon intensity based on the processes and inputs used; and

WHEREAS, the United States Department of Energy has issued guidance defining a Clean Hydrogen Production Standard based on the carbon intensity of production, rather than the method of production, with "well-to-gate" lifecycle intensity as less than or equal to 4.0 kg CO₂e per kg hydrogen; and

WHEREAS, "well-to-gate" refers to carbon intensity associated with a product or process from the point of extraction or production of raw materials to the point where it leaves the manufacturing facility gate; and

WHEREAS, the United States Department of Energy is targeting clean hydrogen production costs in the \$1/kg range within ten years and Louisiana is well-positioned to lead the seeking of this goal due to its vast industrial knowledge, facilities, research universities, trained workforce, and feedstock assets; and

WHEREAS, the study of and policy development for production, infrastructure buildout, and end uses for clean hydrogen will make the Louisiana market more competitive.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby create the Clean Hydrogen Task Force, herein referred to as the "task force", composed of members as hereinafter provided, to study and make recommendations related to the growing clean hydrogen industry in the state, including its production, connective and storage infrastructure, and end use.

BE IT FURTHER RESOLVED that the task force shall be composed of the following members:

- (1) The chairman of the House Committee on Natural Resources and Environment, or his designee.
- (2) The chairman of the Senate Committee on Natural Resources, or his designee.
- (3) The secretary of the Department of Energy and Natural Resources, or his designee.
- (4) The secretary of the Department of Environmental Quality, or his designee.
- (5) The secretary of the Department of Economic Development, or his designee.
- (6) The chairman of the Public Service Commission, or his designee.
- (7) Two appointees from the clean hydrogen industry.

(8) Two representatives from regulated electric power generation and distribution companies, one of whom shall be appointed by the chairman of the House Committee on Natural Resources and Environment and one by the chairman of the Senate Committee on Natural Resources.

(9) Two appointees from the Louisiana higher education system with relevant expertise.

(10) One appointee from a regional economic development organization with relevant policy and ecosystem expertise.

(11) No more than three appointees that represent the interests of the community.

BE IT FURTHER RESOLVED that the task force shall be chaired by the chairman of the House Committee on Natural Resources and Environment or his designee and the chairman shall appoint members unless noted otherwise above.

BE IT FURTHER RESOLVED that the task force shall meet at least quarterly, with an initial meeting no later than July 31, 2024, and be staffed by the Louisiana Department of Energy and Natural Resources, office of energy, if such office is created on or after July 1, 2024, by House Bill 810 of the 2024 Regular Session of the Legislature and otherwise by the discretion of the secretary of the Louisiana Department of Energy and Natural Resources.

BE IT FURTHER RESOLVED that a majority of membership shall constitute a quorum for the transaction of business, and any official business shall require an affirmative vote of the majority of the quorum present and voting.

BE IT FURTHER RESOLVED that the task force shall develop a plan of recommendations for the governor and the legislature on Louisiana's future in clean hydrogen no later than December 1, 2025.

BE IT FURTHER RESOLVED that in developing this plan, the task force shall research and address the following topics:

(1) Assess the growing clean hydrogen economy and workforce in the nation and in the State of Louisiana.

(2) Provide transparency on hydrogen production, connective infrastructure, end use, and impacts on local communities.

(3) Review active and planned clean hydrogen projects, policy initiatives, public and private investments, tax incentives, project permitting, state procurement, pilot projects, projected workforce needs, and regulatory structures in Louisiana.

- (4) Assess public and private policy mechanisms to incentivize clean hydrogen specifically for high-opportunity end uses for the State of Louisiana like ammonia and chemical products, oil and gas refining, maritime fuel production, power production, and port facility operations.
- (5) Recommend policy strategies to accelerate the production and use of clean hydrogen, including processes such as electrolysis and steam methane reforming with carbon capture. Policy recommendations may include recommendations on how to overcome market and technical barriers and accelerate progress in clean hydrogen production; scaling and use, including use of public-private partnerships or demonstration projects; financing mechanisms; incentives; or other policies.
- (6) Assess the largest sources of emissions in Louisiana, the divergence of Louisiana's emission sources compared to other states, and the opportunity of clean hydrogen production to decarbonize sectors of the state economy, reduce emissions and improve air quality.
- (7) Assess opportunities for and barriers to deployment of clean hydrogen in the state economy and policy environment.

BE IT FURTHER RESOLVED that the task force shall submit this plan of recommendations for Louisiana's future in clean hydrogen to the governor, the House Natural Resources and Environment Committee, and the Senate Natural Resources Committee by December 1, 2025 and submit a progress report by March 1, 2025.

BE IT FURTHER RESOLVED that following the submission of the final plan of recommendations the task force shall be disbanded.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the secretary of the Department of Energy and Natural Resources, the secretary of the Department of Environmental Quality, the secretary of the Department of Economic Development, and the chairman of the Public Service Commission.

SPEAKER OF THE HOUSE OF REPRESENTATIVES

PRESIDENT OF THE SENATE