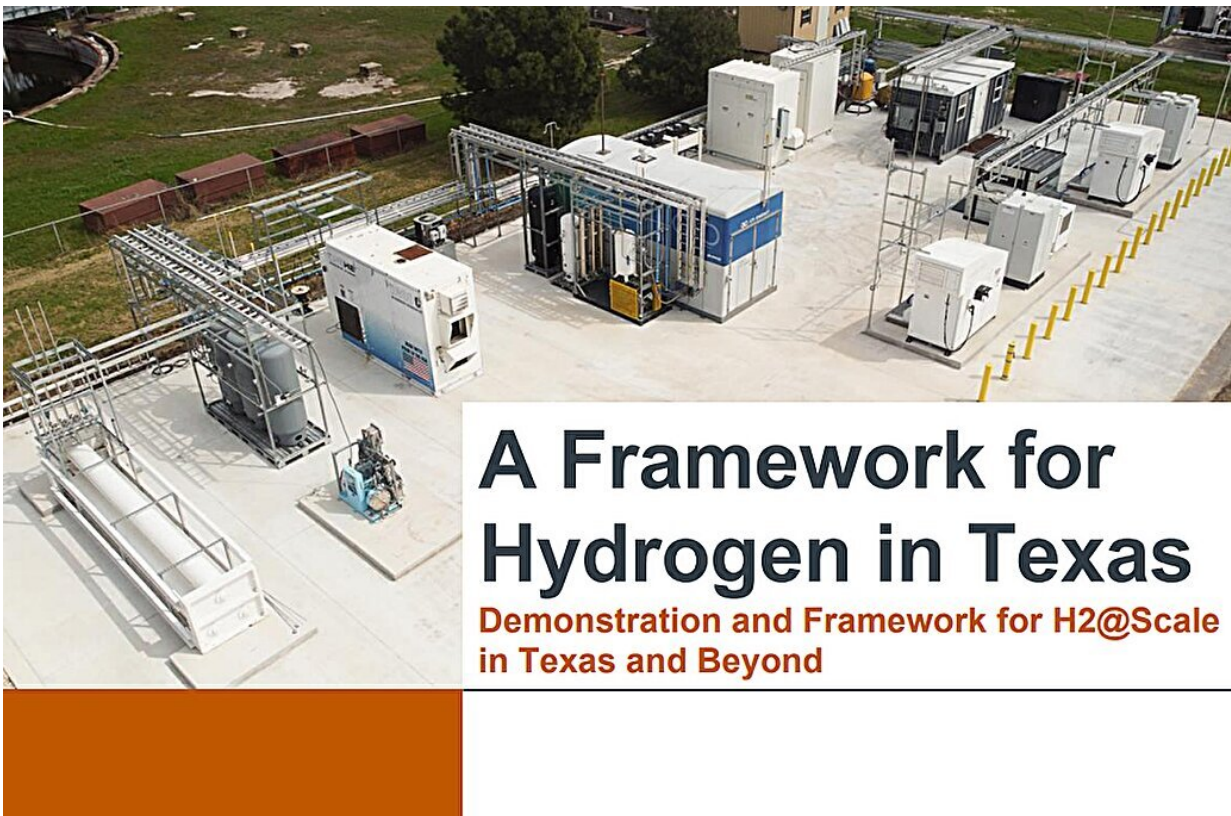


Texas can lead the new hydrogen economy, study finds

April 5 2024, by Nat Levy



Credit: University of Texas at Austin

A new study highlights the potential for Texas to become a global leader in the development of a robust hydrogen economy.

The report, developed by a team of researchers from The University of Texas at Austin, IdeaSmiths, LLC, Frontier Energy, Inc., GTI Energy and Center for Houston's Future, Inc., outlines the benefits, challenges and opportunities associated with scaling up the hydrogen industry in Texas.

The [study](#), titled "A Framework for Hydrogen in Texas," emphasizes that Texas has the necessary resources, infrastructure, and expertise to support the growth of a hydrogen economy.

With abundant natural energy resources, including wind and solar, Texas is well-positioned to produce clean hydrogen at a competitive cost. The state also boasts a significant existing hydrogen infrastructure, including more than 900 miles of hydrogen pipelines, making it an attractive location to develop a hydrogen hub.

"The report introduces hydrogen technology, policy considerations, and a model to assess cost-effective expansion of hydrogen supply chain infrastructure," said Emily Beagle, a research associate in the Webber Energy Group at UT. "So, it provides a basis for industry, the government, and the public to discuss the opportunities and challenges hydrogen offers and frames the unique opportunity hydrogen represents for the state of Texas."

A previous UT study found that a hydrogen-rich, net-zero Texas economy could create more than 750,000 new jobs and have an average net [economic benefit](#) of \$122 billion by 2050. The potential economic benefits, coupled with the environmental advantages of hydrogen as a clean fuel, make the development of a hydrogen economy in Texas a compelling proposition.

The researchers recommend several next steps for Texas to foster the development of a clean hydrogen economy. These include the rollout of

heavy-duty fuel cell trucks and fueling stations, pursuing hydrogen blending for power plant decarbonization, implementing [hydrogen production](#) with [carbon capture](#) and sequestration, and exploring opportunities for hydrogen exports.

The study's findings provide insights for policymakers, industry stakeholders, and investors interested in the future of the hydrogen industry in Texas. By leveraging its existing resources and infrastructure, Texas can lead the way in the transition to a sustainable and low-carbon energy future.

"Hydrogen is an important component of the transition to [clean energy](#)," said Brian Weeks, senior director of research and development for GTI Energy and one of the report's co-authors. "Hydrogen leverages existing energy infrastructure and workforce, while supporting the growth of low-carbon energy feedstocks. It is truly a 'win-win' for the energy industry, job creation, and the environment."

However, the study also highlights the challenges that need to be addressed for the widespread adoption of hydrogen. Cost is a significant barrier, with the current levelized cost of hydrogen production being higher than conventional fuels. The study suggests that reducing the cost of clean hydrogen production and addressing technical and economic issues in transportation and storage infrastructure are crucial steps in realizing the full potential of the hydrogen economy.

This study is part of the Demonstration and Framework for H2@Scale in Texas and Beyond project, which is supported by the U.S. Department of Energy's Hydrogen and Fuel Cell Technologies Office. A collaboration between project partners UT, GTI Energy, and Frontier Energy and industry partners across the entire hydrogen value chain, the overall goal is to demonstrate how hydrogen production and use can enable grid resiliency, align domestic industries, increase

competitiveness, and promote job creation.

As part of this project, a first-of-its-kind research and development facility will soon open at UT, integrating commercial hydrogen production, distribution, storage, and use.

More information: Study: [A Framework for Hydrogen in Texas](#)

Provided by University of Texas at Austin

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