

Studies from University of Texas Austin Provide New Data on Sustainable Energy (Navigating the Implementation of Tax Credits for Natural-Gas-Based Low-Carbon-Intensity Hydrogen Projects)

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2024 APR 20 (VerticalNews) -- By a News Reporter-Staff News Editor at Investment Weekly News -- Investigators publish new report on sustainable energy. According to news originating from Austin, Texas, by VerticalNews correspondents, research stated, "This paper delves into the critical role of tax credits, specifically Sections 45Q and 45V, in the financing and economic feasibility of low-carbon-intensity hydrogen projects, with a focus on natural-gas-based hydrogen production plants integrated with carbon capture and storage (CCS)."

Financial supporters for this research include [University of Texas](#) At Austin **Bureau of Economic Geology**; State of Texas Advanced Resource Recovery.

Our news reporters obtained a quote from the research from [University of Texas Austin](#): "This study covers the current clean energy landscape, underscoring the importance of low-carbon hydrogen as a key component in the transition to a sustainable energy future, and then explicates the mechanics of the 45Q and 45V tax credits, illustrating their direct impact on enhancing the economic attractiveness of such projects through a detailed net present value (NPV) model analysis. Our analysis reveals that the application of 45Q and 45V tax credits significantly reduces the levelized cost of hydrogen production, with scenarios indicating a reduction in cost ranging from USD 0.41/kg to USD 0.81/kg of hydrogen. Specifically, the 45Q tax credit demonstrates a slightly more advantageous impact on reducing costs compared to the 45V tax credit, underpinning the critical role of these fiscal measures in enhancing project returns and feasibility. Furthermore, this paper addresses the inherent limitations of utilizing tax credits, primarily the challenge posed by the mismatch between the scale of tax credits and the tax liability of the project developers. The concept and role of tax equity investments are discussed in response to this challenge."

According to the news editors, the research concluded: "These findings contribute to the broader dialogue on the financing of sustainable energy projects, providing valuable insights for policymakers, investors, and developers in the hydrogen energy sector. By quantifying the economic benefits of tax credits and elucidating the role of tax equity investments, our research supports informed decision-making and strategic planning in the pursuit of a sustainable energy future."

For more information on this research see: Navigating the Implementation of Tax Credits for Natural-Gas-Based Low-Carbon-Intensity Hydrogen Projects. *Energies*, 2024,17(7). (*Energies* - <http://www.mdpi.com/journal/energies>). The publisher for *Energies* is MDPI AG.

A free version of this journal article is available at <https://doi.org/10.3390/en17071604>.

Our news journalists report that more information may be obtained by contacting Ning Lin, **Bureau of Economic Geology**, [University of Texas Austin](#), Austin, TX 78712, United States. Additional authors for this research include Liying Xu.

Keywords for this news article include: [University of Texas Austin](#), Austin, Texas, United States, North and Central America, Gases, Elements, Hydrogen, Oil & Gas, Natural Gas, Sustainable Energy, Inorganic Chemicals, Finance and Investment, Investment and Finance, Sustainability Research.

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