Biotechnology - Biofuel; Research Conducted at University of Texas Austin Has Updated Our Knowledge about Biofuel (Levelized Cost Pass-through of Green Hydrogen In the Bioethanol Fuel Value Chain In U.s. Midwest)

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2026 APR 29 (NewsRx) -- By a News Reporter-Staff News Editor at Biotech Week -- A new study on Biotechnology - Biofuel is now available. According to news originating from Austin, Texas, by NewsRx correspondents, research stated, "This study provides an integrated levelized cost pass-through analysis of the green hydrogen-green ammonia-corn-ethanol value chain, combining techno-economic modeling, environmental impact assessment, and federal tax credit incentives (Inflation Reduction Act, 45V and 45Q) into a unified analytical framework within the U.S. Midwest corn and ethanol supply chain."

Funders for this research include Energy Institute at The University of Texas at Austin, GEOH2 industry affiliates, STARR program at the **Bureau of Economic Geology** at The University of Texas at Austin, National Science Foundation (NSF).

Our news journalists obtained a quote from the research from the University of Texas Austin, "We determine that the levelized cost of green hydrogen ranges from $2.79/kg to $5.39/kg - depending on the availability of a $3/kg 45V tax credit - compared to $1.49-$2.18/kg for conventional hydrogen produced via steam methane reforming. These differences propagate downstream, resulting in green ammonia costs of $0.65/kg with the tax credit and $1.16/kg without, relative to a conventional cost range of $0.39-$0.59/kg. Consequently, corn production costs increase by $0.11 to $0.35 per bushel, which in turn raises the ethanol break-even price by $0.04-$0.12 per gallon. Despite these cost increases, green ammonia offers substantial environmental benefits, achieving up to a 96% reduction in lifecycle CO2 emissions compared to conventional ammonia and lowering emissions from corn production and ethanol generation by 33% and 9.1%, respectively."

According to the news editors, the research concluded: "Our in-depth analysis illuminates the complex trade-offs between higher input costs and environmental benefits, providing a robust assessment of the long-term viability of green fertilizer inputs in the agricultural and biofuel sectors."

This research has been peer-reviewed.

For more information on this research see: Levelized Cost Pass-through of Green Hydrogen In the Bioethanol Fuel Value Chain In U.s. Midwest. Sustainable Energy Technologies and Assessments, 2026;87. Sustainable Energy Technologies and Assessments can be contacted at: Elsevier, Radarweg 29, 1043 Nx Amsterdam, Netherlands.

The news correspondents report that additional information may be obtained from Mariam Arzumanyan, University of Texas Austin, Bur Econ Geol, 10100 Burnet Rd, Bldg 130, Austin, TX 78758, United States. Additional authors for this research include Karey Maynor, Vaibhav Bahadur and Ning Lin.

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