



# Generating Benefits for a Cleaner Future

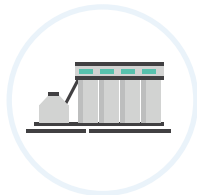
Nebraska, Iowa, and Missouri have jointly formed the Midcontinent Clean Energy Hydrogen Hub (MCH2) and submitted a proposal to the U.S. Department of Energy (DOE) in response to the DOE's Regional Clean Hydrogen Hubs (H2Hubs) Funding Opportunity Announcement (FOA). As part of a larger \$8 billion hydrogen hub program funded through the Infrastructure Investment and Jobs Act (IIJA), the H2Hubs will be a central driver in helping communities across the country benefit from clean energy investments, good-paying jobs, and improved energy security.

The U.S. and the world are in an unprecedented state of food insecurity due to energy and fertilizer shortages. With innovative hydrogen production and consumption technologies, MCH2 is uniquely positioned to provide less carbon-intensive fertilizers and increase food security regionally, domestically, and globally. For example, Greenfield Nitrogen will produce zero carbon, green ammonia to decarbonize corn production while Verbio will increase efficiency of biological methane by nearly doubling its gas production to reduce emissions by displacing fossil-based methane.

MCH2 also represents the highest concentration of ethanol and biofuel production domestically, offering countless opportunities to improve and expand products and markets for these industries. Opportunities include the increased production of sustainable aviation fuel (SAF) and renewable diesel, thereby increasing biofuels' contributions to decarbonizing the transportation sector.

Major national interstate systems in our region, such as I-80, I-35, I-70, and I-29 create opportunities for distribution and transportation-related consumption in the form of hydrogen fuels and hydrogen-enhanced biofuels. Additionally, the NuStar ammonia pipeline, which runs through all three states, transports upwards of 30,000 barrels of ammonia per day to facilities across the Midwest and Gulf region. MCH2 also boasts diverse project partnerships, including Werner Enterprises which has committed to utilizing new hydrogen-fueled semi-trucks, Monolith Materials which is expanding its existing Nebraska-based carbon black facility, and Tallgrass Energy which plans to convert its Trailblazer pipeline to safely transport captured carbon from various hydrogen production processes across the region.

## The MCH2 hub has diversity in hydrogen production and end-use applications



Fertilizer needs for the nation's largest corn-producing region



Transportation fuels: hydrogen, ethanol, renewable diesel, and sustainable aviation fuel



Power generation at retrofitted combustion turbine and industrial facilities



Industrial applications, including cement and steel production

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DOE's Regional Clean Hydrogen Hubs (H2Hubs) Funding Opportunity Announcement (FOA)

