



MEMORANDUM OF UNDERSTANDING Mid-Continent Clean Hydrogen Hub – MCH2

This Memorandum of Understanding (“MOU”) made on this 4th day of April, 2023, by and between the States of Iowa, Missouri, and Nebraska, establishes a framework for coordinating and developing a regional clean hydrogen hub (“Hydrogen Hub”) as contemplated by the 2021 Infrastructure Investment and Jobs Act, Pub. Law 117-58 (“Act”). The States of Iowa, Missouri, and Nebraska have created the Mid-Continent Clean Hydrogen Hub (“MCH2”) and may be referred to collectively as “Participating States” or “Signatory States.” MCH2 consists of a world class and diverse team, including Monolith Materials, Inc., Project Meadowlark, VERBIO, Ideal Energy, and Greenfield Nitrogen (collectively the “Parties”).

WHEREAS, clean hydrogen has the potential to advance the interests of the Participating States in clean air, reduction of carbon emissions, jobs, rural and urban economic development, and equitable energy opportunities.

WHEREAS, the 2021 Act allocates \$8 billion in funding for four or more regional hydrogen hubs.

WHEREAS, the Participating States are uniquely qualified and situated to serve as a Hydrogen Hub with a thriving hydrogen economy given the presence of high-quality wind, solar, biomass, nuclear, agricultural, and other energy resources; a sophisticated oil and natural gas industry; a robust energy transportation infrastructure; an established carbon management infrastructure and favorable geology; early-stage public and private hydrogen economy development initiatives; world-leading national laboratory facilities and academic institutions; and industrial areas that are potential early adopters of clean hydrogen technologies.

WHEREAS, addressing the shared challenges of a healthy environment and modern energy economy require regional collaboration.

WHEREAS, the agricultural assets of the Participating States are complementary, including crop, animal, fertilizer production, and end users.

WHEREAS, the energy assets of the Participating States are complementary, including electricity generation sources, pipelines, underground storage availability, and end users.

WHEREAS, the success of a Hydrogen Hub rests firmly on the collaboration, leadership, and innovation of states, researchers, and private businesses with diverse expertise and talents.

WHEREAS, a cost-effective strategy with the ability to scale the production, transportation, storage, and use of clean hydrogen benefits from interstate collaboration and coordination.

WHEREAS, the Participating States share a mutual interest in the demonstration and growth of clean hydrogen production, transportation, storage, and use to advance their individual and collective goals.

NOW, THEREFORE, the Governors of the Participating States agree as follows:

I. Commitment

The Signatory States hereby pledge their support for MCH2 for funding under the Act that advances a compelling vision for a hydrogen economy, including production and use in the central United States (“U.S”). The Signatory States are committed to an application that works with academic, research, industry, and community partners and stakeholders to ensure the application:

- Drives economic growth and development for each of the participating states and the region.
- Incorporates the latest science, research, and technology for the cost-effective production, transportation, storage, and use of clean hydrogen.
- Ensures protections for and the participation of frontline and disadvantaged communities, including safeguards around public health, safety, and labor.
- Develops a pathway for workforce development and training.



- Provides for information exchange and collaborative research, including engagement with research and educational institutions, to maximize economic opportunities, monitor emissions and MCH2 performance, and thoughtfully plan expansion of MCH2 and the use of hydrogen technology over time.
- Addresses pipeline safety, leak minimization, and pathways for new pipeline construction.
- Proactively evaluates and addresses the potential impacts of hydrogen production on water use and seeks opportunities to use water that is currently used for or generated by other industrial or power generation purposes.
- Engages key stakeholders, including end-users in the agricultural, industrial, buildings, aviation, power generation, and transportation sectors.
- Addresses the air quality impacts of hydrogen production, transportation, storage, use, and combustion, including emissions of nitrogen oxides.
- Identifies current and possible State resources, incentives, policies, and plans that can be leveraged in support of a flourishing and competitive hydrogen economy among the participating States.
- Respects the unique needs and policy approaches of each participating State.

The MCH2 will conduct its work by Participating States' collaboration in the creation of a robust and sustainable model that will include hydrogen production pathways and volumes from multiple sources, transportation and storage, market / fabrication / end user, and carbon intensity metrics. The model will be able to optimize on a state-by-state or regional perspective. The results of the model will inform the Participating States' activities, but shall not bind the Participating States to particular actions or outcomes.

II. Hub Oversight and Management Agreements

In addition to an application for funding, the Parties intend to develop and finalize a Collaboration Agreement ("Collaboration Agreement"). The Collaboration Agreement shall set forth the structure, governance, obligations, expectations, management, and oversight of the Hydrogen Hub and the roles, responsibilities, obligations, and authority of the Parties involved in the Hydrogen Hub for the entire duration of MCH2. The Collaboration Agreement will confirm the methodology for the distribution of any U.S. Department of Energy (DOE) funds through the MCH2 regional hub.

III. Timeline

The Participating States collective work will meet FOA DOE submittal team deadlines for Federal funding opportunities for regional hydrogen hubs for the final FOA and support submittal submission of an application by the due date of April 7, 2023.

IV. Disclosure of Information

Participating States and those entities performing contractual services on behalf of the MCH2 will not make public or private representations as to the purpose or intent behind each Participating State's participation, except as expressly agreed to by the respective Participating State. As governed by the laws and regulations of each Participating State, Participating States and those entities performing contractual services on behalf of the MCH2 will maintain the confidentiality of details pertaining to the Hydrogen Hub.

V. Additional Member States

Upon agreement of all Participating States, additional States may be added to this MOU to support the MCH2, subject to the provisions being developed under the Collaboration Agreement, to enhance the ability to establish a Hydrogen Hub.

VI. Voluntary Initiative

This MOU is not legally binding and does not create any legal, equitable, or financial rights, commitments, obligations or liabilities for the Participating States. Any Participating State may cease cooperation under this MOU at any time upon written notice to the other Participating States. This MOU may be amended by a written



instrument signed by each Participating State. The terms of this MOU do not preclude any Participating State from participation in other efforts, including, but not limited to, other hydrogen hubs.

Administrative costs to support the MCH2 funding application to the DOE will be based on any use of consultation work to support specific funding project requests, modeling, or evaluation and in accordance with the terms of the DOE award. Funding support for any State-based projects for this application and any future requests will be governed by the respective projects' corresponding budget funding requests. This MOU does not obligate any Participating State to receive, distribute, or contribute any funds for these purposes.

VII. Duration

This MOU is at-will and may be terminated by any State upon written notice to the other States. The MOU will continue following any such termination, so long as the remaining Participating States agree.

[Signature page follows]

IN WITNESS WHEREOF, the Participating States have executed the foregoing Memorandum of Understanding effective as of the date first indicated above.

State of Iowa

Kim Reynolds



By: Kim Reynolds

Title: Governor

Date: 4/5/23

State of Missouri

Mike Parson



By: Mike Parson

Title: Governor

Date: 4/4/2023

State of Nebraska

Jim Pillen



By: Jim Pillen

Title: Governor

Date: 4/4/23