

Clean Hydrogen in the Midwest

Made up of public and private entities representing every phase in the hydrogen value chain, the Midwest Alliance for Clean Hydrogen (MachH2) is united in a shared vision to create an immediately scalable hydrogen hub in the Midwest that deploys the region's abundant carbon-free energy to create a clean hydrogen economy and reduce emissions across multiple heavy emitting sectors. Below are potential uses of clean hydrogen that the MachH2 hub will help accelerate.

Uses of Clean Hydrogen



Transportation and Mobility

Transportation accounts for 33% of U.S. greenhouse gas emissions and is a high priority target for decarbonization efforts.

Use: Fueling and powering vehicles such as buses and trucks with zero emissions of greenhouse gasses or pollutants.



Aviation

Aviation is responsible for around 2.5% of global CO2 emissions, with most aircraft powered by petroleum jet fuel.

Use: Helping aviation reduce its carbon footprint by providing a zero-emission fuel for hydrogen fuel cell or hydrogen combustion engines and in the production of sustainable aviation fuel (SAF).



Steelmaking

Steel is one of the world's most energy-intensive industries, responsible for 7-9% of direct fossil emissions.

Use: Replacing fossil fuels in the steelmaking process, reducing carbon emissions and creating a more sustainable and environmentally friendly steel production.



Agriculture

Half of the world's food production relies on fertilizer made from ammonia, the second-most commonly produced chemical in the world.

Use: Producing ammonia, which can help to reduce the carbon footprint of the fertilizer industry and support sustainable agriculture practices.



Cement

Cement is produced with electricity and natural gas. Four billion metric tons of cement are produced annually – amounting to 7% of global carbon emissions.

Use: Replacing fossil fuels with zero-emission fuel which will reduce the cement industry's carbon footprint.