

ACT NOW ON HYDROGEN ENERGY!

Supporting a healthy environment, economic development, and global leadership in the hydrogen economy

Developing a prosperous hydrogen economy and ensuring that the people of Illinois benefit from this potential requires bold action from the state to strengthen and prioritize commitments in hydrogen policy, infrastructure, technology, and education.

The Department of Energy recently launched an initiative to reduce clean hydrogen costs by 80%, and the current version of the Infrastructure Investment and Jobs Act authorizes \$8B to establish at least four regional clean hydrogen hubs.

Illinois is well positioned to lead one of these hubs—but we must act quickly to mobilize our assets if we are to successfully compete with other states.

WHY HYDROGEN?

Hydrogen is a clean-burning fuel source that can be produced and used without toxic pollution or CO₂ emissions. Hydrogen, particularly the “green” hydrogen produced by renewable electricity, can meet the energy storage needs required to slash CO₂ emissions, and technological advances make it feasible for grid storage, transportation, metals refining, and heat for buildings and industrial applications. It can power an internal combustion engine or feed into a fuel-cell device that converts hydrogen’s chemical energy into electricity. In either case, the only emission produced is water vapor. When hydrogen fuel cells are used to power an electric motor, the system is more than twice as efficient as conventional internal combustion engines.

WHY ILLINOIS?

Notably, Illinois has abundant resources for producing CO₂-free hydrogen such as wind, solar, and nuclear power. Illinois also has a large manufacturing base and a transportation infrastructure that has the third most extensive interstate highway network, and 70% of east-west rail traffic passes through Chicago. Workers displaced from operations such as coal mining and coal power plants.

WHO BENEFITS FROM INNOVATIONS IN HYDROGEN?

Illinois workers, manufacturers, the environment, and the broader Illinois economy!

The hydrogen industry is well positioned to offer opportunities for developing and employing Illinois’ skilled and trained workforce—nationally, experts expect the hydrogen economy to generate approximately 1M new hydrogen energy and fuel cell jobs in the next decade. Many potential end-uses of hydrogen, such as powerplants, and freight, airline, and shipping vessels (which today are generally powered by fossil fuels), already employ large numbers of high paying jobs. Further, a thriving hydrogen industry would provide employment opportunities for workers displaced from operations such as coal mining and coal power plants.



Hydrogen is a flexible resource

Uses include:

- storing large quantities of renewable and zero-carbon electricity for extended periods
- transportation fuel for various on-road, off-road, rail, aviation, and maritime applications
- steel production as a substitute for coal
- ammonia and fertilizer production
- fueling thermal applications in residential, commercial, and industrial settings
- decarbonizing the natural gas supply chain

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WHAT ARE THE NEXT STEPS?

Develop a state-wide roadmap for the production to create a state-wide roadmap for the production, deployment, and use of hydrogen. The plan will detail strategies and tactics to encourage the expansion of the hydrogen economy in Illinois.



Develop Policy

including regulatory framework, tax structure, & incentives



Create Infrastructure

to transport, store, and dispense hydrogen



Enhance Technology

to reducing costs, and enhance utilization



Educate & Train

a skilled workforce with opportunities for good jobs

MIDWESTERN HYDROGEN PARTNERSHIP

Partnership

The Midwestern Hydrogen Partnership is a collaboration of industrial, academic, research institutions, government, and other interested stakeholders that work cooperatively to enable the Midwest to address the challenges, barriers, and opportunities that can enable a prosperous hydrogen economy in the Midwest

Mission Statement

The Midwestern Hydrogen Partnership aims at advancing and promoting the development and adoption of hydrogen technologies to provide clean, secure, and resilient energy sources, and create economic development opportunities throughout the Midwest

Advisory Board

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HYDROGEN IN ACTION IN CHAMPAIGN-URBANA

The first real hydrogen project in the state

In mid-October, the Champaign-Urbana Mass Transit District recently deployed two Hydrogen Fuel Cell Buses and the support system to run them. The project includes hydrogen production, a fueling station, and partnership with Parkland College to train a skilled workforce capable of maintaining and growing the fleet.

