HYDROGEN ENERGY & FUEL CELLS

Economic Benefits

Full-scale hydrogen energy deployment can help revitalize the U.S. economy and accelerate American innovation.

The Inflation Reduction Act (IRA) and Infrastructure Investment and Jobs Act (IIJA) will be making generational investments in alternative energy technologies and fuels that not only put us on the path to decarbonization, but also position the U.S. economy to become the global leader in the transformative industries and technologies of the future.

We must work together to seize this moment of opportunity to invest in our future, modernize our economy, and equip our workforce with next-generation skills to successfully navigate the energy transition.

Hydrogen energy and fuel cell technologies offer a clear pathway toward low- and no-carbon emissions economic growth, while creating high-quality jobs and spurring advanced American manufacturing. Without increased investment on par with that of international competitors, the U.S. risks forgoing these benefits, including the opportunity to keep and create more American jobs in advanced industries and develop a leading edge in alternative energy technologies.

CREATING JOBS

A thriving hydrogen economy will create millions of high-quality, high-paying jobs.

By 2050, hydrogen could support up to 3.4 million jobs across a variety of sectors and geographies. From hydrogen production and distribution to equipment manufacturing, job growth would be felt in many regions across the country — even those that are not traditionally energy producers.

This new hydrogen job market will be inclusive, accessible, and supportive, offering a variety of both entry level and higher-paying jobs. Coupled with a robust workforce development program, the hydrogen economy has the potential to offer new skills and financial support to millions of Americans.

By 2030, annual investment of $8 billion can drive significant growth in the hydrogen economy.

Economic Impacts by 2030

FCV Sales	H_2 Fueling Stations	Total H_2 Revenue	Total Jobs in the H_2 Economy
1.2M	4.3k	$140B	700k

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Fuel Cell & Hydrogen Energy Association

For more information, please visit https://www.fchea.org/hydrogenbonds

DRIVING ECONOMIC GROWTH

A robust hydrogen industry will generate billions in revenue up and down the value chain.

With applications in diverse sectors such as transportation, power generation, and industrial processes, hydrogen energy can drive growth in a variety of markets across the U.S. economy.

> Hydrogen can help meet **14%** of final U.S. energy demand, generating up to **$750 billion in revenue per year** by 2050.

ACCELERATING INNOVATION

A rapid build-out of hydrogen infrastructure and fuel cell technology will spark U.S. manufacturing activity and innovation.

> The hydrogen economy stands to generate **$475 million in manufacturing demand** for hydrogen production and distribution equipment, specialized materials, and innovative end-use applications, helping to support American innovation and advanced manufacturing jobs.

A growing hydrogen economy would support and expand the large network of U.S. companies with existing expertise in energy production and advanced manufacturing, as well as a growing class of energy disrupters. The costs of hydrogen and fuel cell production will continue to fall as investment and R&D grows, making hydrogen a truly accessible, game-changing technology.

Estimated revenue generated along the hydrogen value chain by 2050

Billion USD

POLICY SUPPORT

Policy support can spur the development of a vibrant hydrogen economy, driving job creation and innovation up and down the value chain.

The hydrogen industry has the potential to drive significant economic growth for all Americans Policymakers can support these efforts by:

- Facilitating hydrogen fuel and fuel cell deployment at-scale with smart regulation and rulemaking.
- Supporting outreach and skilled workforce development.
- Making systemic changes to support a hydrogen economy, including permitting reform and updating and harmonizing technical codes and safety standards.
- Investing in the infrastructure systems needed to support hydrogen deployment at scale.

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Data and assumptions discussed in this fact sheet are based on McKinsey & Co.'s Roadmap to a U.S. Hydrogen Economy report and The hydrogen economy and jobs of the future. For more information and full citations, please visit https://www.fchea.org/hydrogenbonds