



AES and Green hydrogen



AES is developing and producing renewable energy and green hydrogen solutions to **accelerate our customers' decarbonization goals** and advance the clean energy transition in the United States and globally.



Hydrogen demand reached 94 million tons (Mt) in 2021, equal to about 2.5% of global final energy consumption, the majority of which is produced using fossil fuels. Converting existing uses of hydrogen and expanding use cases in difficult to decarbonize and electrify sectors across the globe with green hydrogen would have a significant decarbonization impact while benefiting the global economy.

Green hydrogen – defined as hydrogen that is produced from renewable energy – can be used in many diverse applications and is a critical technology to reduce emissions in some of the highest emitting industries, including shipping, steel and chemicals.

With AES' expertise as a clean energy leader, partnering with our customers to co-create greener energy solutions to best meet their needs, and innovator in clean technologies,

We are positioned to develop and deliver the **lowest-cost green hydrogen** to **meet customer energy demands** around the world.

Green hydrogen challenges and what we're doing about them

Green hydrogen is key to reaching net-zero by eliminating emissions from difficult to decarbonize sectors. However, there are key challenges to accelerate green hydrogen adoption.



Cost - Due to the early stage nature of the industry, high cost electrolysis technology results in high cost hydrogen. AES is addressing this by driving demand for electrolysis and building at scale, which in turn lowers overall cost of green hydrogen.



Availability & Scale - As a fuel of the future, green hydrogen needs to be available globally to enable worldwide decarbonization. While there are several processes that can be used to produce hydrogen, electrolysis powered by renewable energy is one of the most viable methods to produce emissions-free hydrogen that is cost-effective enough to bring to scale.



Safety - Wide-scale adoption requires significant coordination, working with policymakers, partners and consortiums to ensure a comprehensive framework on the safe use of hydrogen.

This is why AES is innovating in several key ways to develop the most cost-competitive and widely available green hydrogen.





AES innovations driving cost reductions, efficiency and adoption of green hydrogen



Engineering innovation & expertise

History of proven innovation, including creating and patenting a DC-coupled solar-plus-storage solution. DC-coupled technology will be critical to further reduce cost and improve efficiency in green hydrogen systems.



Customer-centric product innovation

Recognized for our global leadership launching the energy storage industry together with Fluence and a first-of-its-kind 24/7 carbon-free energy solution to power data centers, supporting further innovations in dispatchable, flexible renewable loads.



World-leading renewable energy solutions

AES is one of the nation's largest renewable energy developers and the most successful corporate PPA developer globally, critical to driving hydrogen supply agreements.



Leverage existing infrastructure

Through our Cleaner reliability product line, we provide the capacity support to increase the buildout of renewables and position us at the forefront of helping countries that have historically been dependent on carbon intensive fuels. As green hydrogen-based fuels emerge, we are equipped to support the transition with our customers.

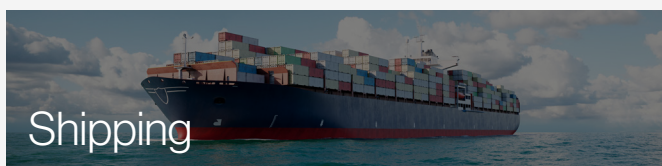
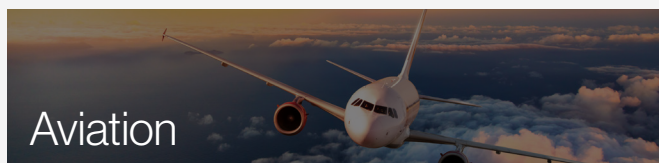
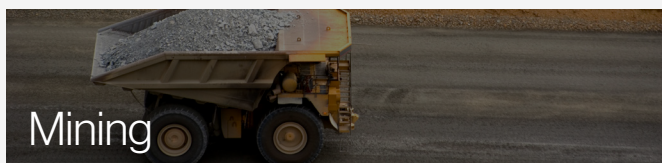
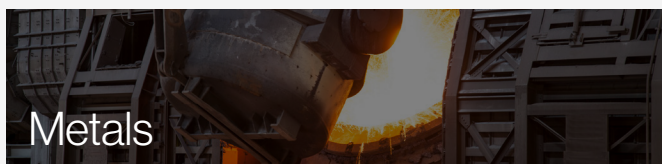


Delivering green hydrogen at scale

In addition to developing green hydrogen projects, we are actively engaged in industry initiatives and policy advocacy that will build the foundation for a robust and thriving new market. We are participating in green hydrogen hubs across the country and key green hydrogen coalitions, which will help to shape and scale the entire sector going forward.

Who green hydrogen can benefit

Green hydrogen can decarbonize many diverse sectors through its ability to provide fuel, heat and power systems and energy storage services. Examples of these sectors and applications include:



AES is a **leader in the hydrogen industry** developing green hydrogen projects around the world. A few highlights include:

United States



AES is jointly investing in a **\$4 billion mega-scale green hydrogen project**, including 1.4 GW of new wind and solar power along with electrolyzer capacity capable of producing over 200 metric tons per day (MT/D) of green hydrogen, making it the largest green hydrogen facility in the United States.

[Learn more →](#)

Chile



Decarbonizing supply chains through green hydrogen production at AES Chile.

[Learn more →](#)

Brazil



Produce and export green hydrogen internationally at AES Brasil.

[Learn more →](#)



Why AES?

We are building on our leading expertise innovating integrated renewable energy and carbon-free energy storage solutions to deliver reliable, cost-competitive green hydrogen solutions to our customers.

#1

clean energy developer
for corporations globally
(BloombergNEF)

Best Global ESG Power Producer

Capital Finance International (CFI)

64+ GW

renewables pipeline

AES is committed to innovating and developing green hydrogen to realize a net-zero future by 2050. With today's fossil energy prices, renewable hydrogen could already compete with hydrogen from fossil fuels in many regions, especially those with good renewable resources and that must import fossil fuels to meet demand for hydrogen production.

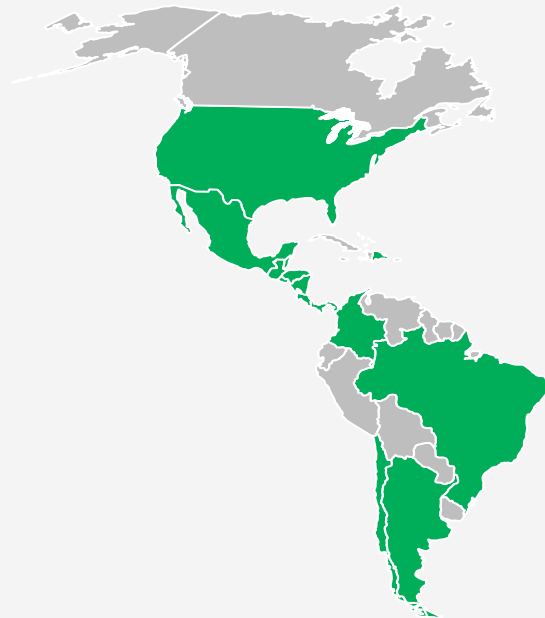


Learn more about how we can
accelerate the future of energy
with you with green hydrogen and
connect with our team at

aes.com/green-hydrogen

Global x local

AES is the only US-based global power company in the world, delivering smarter, greener energy solutions for our customers in 14 countries.



The AES Corporation (NYSE: AES) is a Fortune 500 global power company accelerating the future of energy.

Learn more at aes.com.

