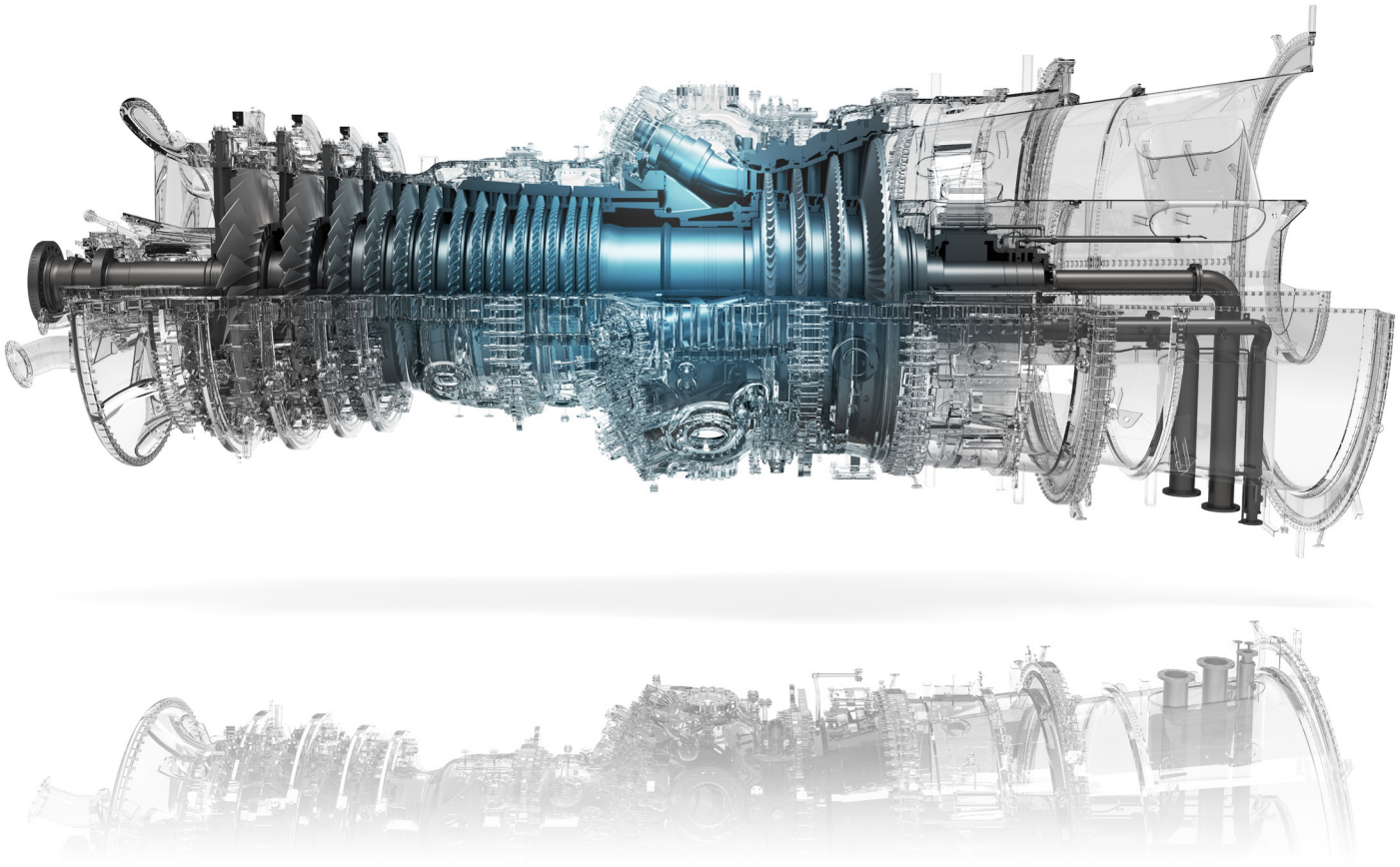
MHPS

Mitsubishi Hitachi Power Systems



MHPS - Change in Power

Powering the Next Generation, With Renewable Hydrogen

In the shifting energy landscape, MHPS is leading a Change in Power with its innovative advanced class gas turbines.

MHPS has been a leader in hydrogen fueled gas turbines for almost 50 years

Renewable hydrogen can decarbonize power generation.

Hydrogen fueled gas turbines offer enormous potential for the future of power.

As the provider of the world's most efficient gas turbines operating today, MHPS leads the way in technology and reliability. Recent hydrogen fuel tests on large-scale MHPS advanced class gas turbines have been successful and represent an important step toward 100% hydrogen fueled power.

With MHPS partnership, customers can diversify their energy portfolio without sacrificing power reliability—eventually producing electricity with zero carbon dioxide emissions. As the industry moves from natural gas toward hydrogen power, current MHPS turbines, with minimal modifications, will be upgraded to utilize this new fuel. For operators that require environmentally friendly power solutions and a future-proof investment, MHPS Advanced Class Gas Turbines are the answer.

Clean Energy with Zero Carbon

Excess electricity from solar, wind, and other renewable energy sources can be used to create renewable hydrogen through electrolysis, splitting hydrogen from oxygen. The resulting hydrogen can then be stored for future use. With 100% hydrogen fuel, customers can operate efficiently—with zero carbon emissions.

Fuel for the Future

In 2025, MHPS will demonstrate performance with 100% renewable hydrogen. Following a successful demonstration, MHPS will offer this technology on new units and as fleet upgrades.

LEADING A CHANGE IN POWER

Changeinpower.com

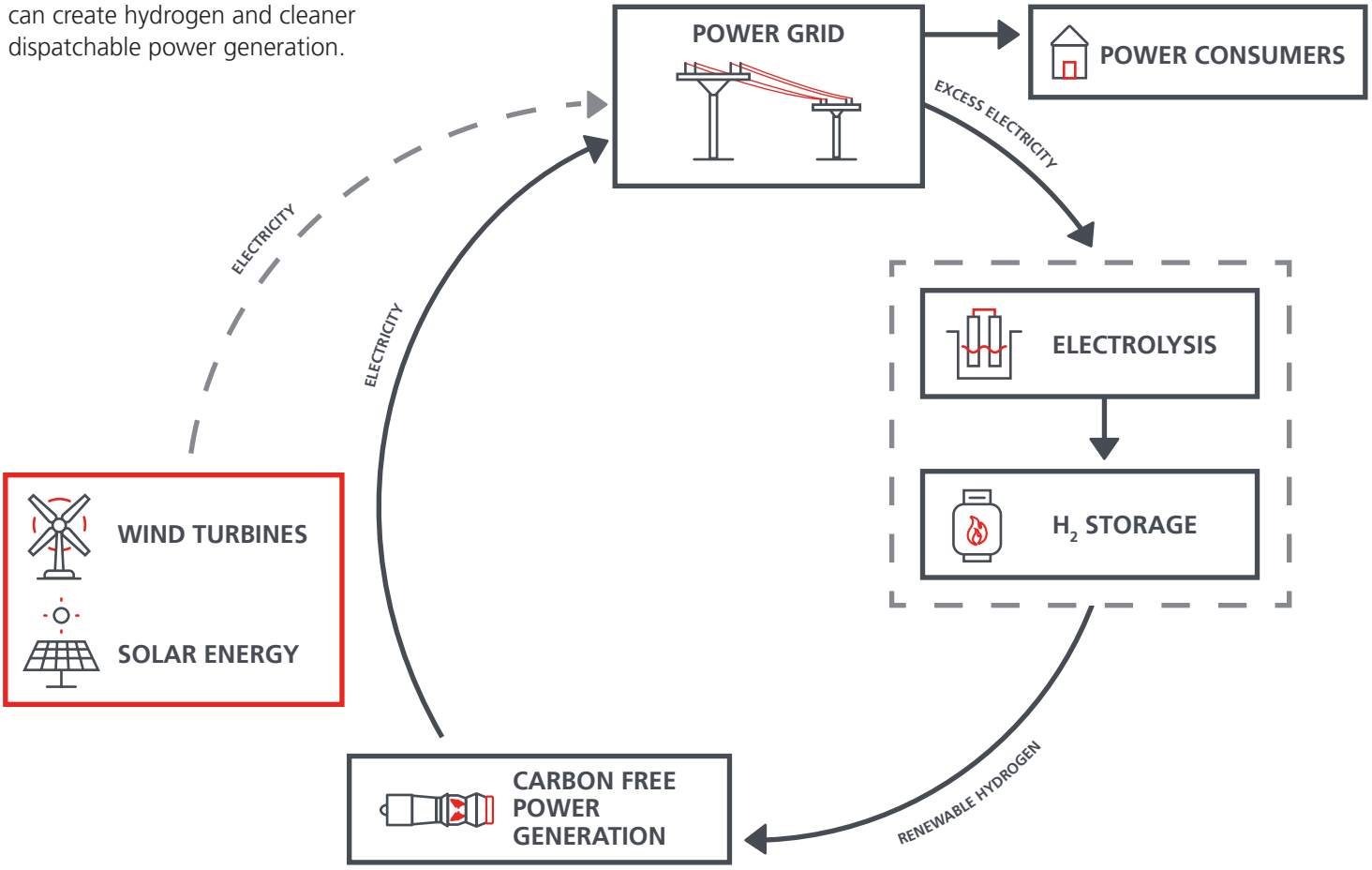
Mitsubishi Hitachi Power Systems Americas, Inc.
407-688-6100

Harnessing Renewable Hydrogen

Renewable energy sources have low operating costs, but require certain capacity factors to pay back their capital cost. Meanwhile, seasonal and even daily weather changes can affect supply and demand. This chart shows how using excess electricity from renewables to power electrolysis creates a storage bank of hydrogen that can be used as fuel for low-cost, clean, and dispatchable power generation.

A Renewable Energy System

How renewable energy sources can create hydrogen and cleaner dispatchable power generation.



LEADING A CHANGE IN POWER

Changeinpower.com

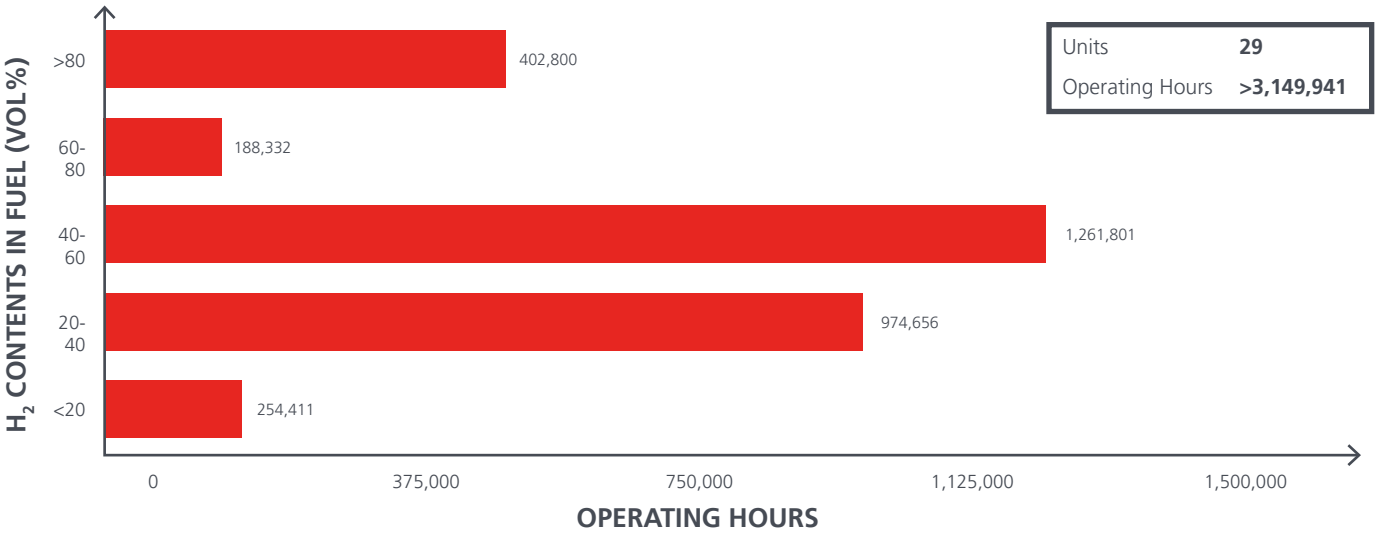
Mitsubishi Hitachi Power Systems Americas, Inc.
407-688-6100

3 Million+ Operating Hours With Hydrogen

As energy companies turn to hydrogen, MHPS has extensive hydrogen firing experience that dates back nearly 50 years and includes refineries, Syngas and COG (Coke Oven Gas) locations. Our experience with 29 power plants uses fuel with up to 90% hydrogen content and has accumulated over 3 millions hours of operation.

MHPS Hydrogen Turbine Experience

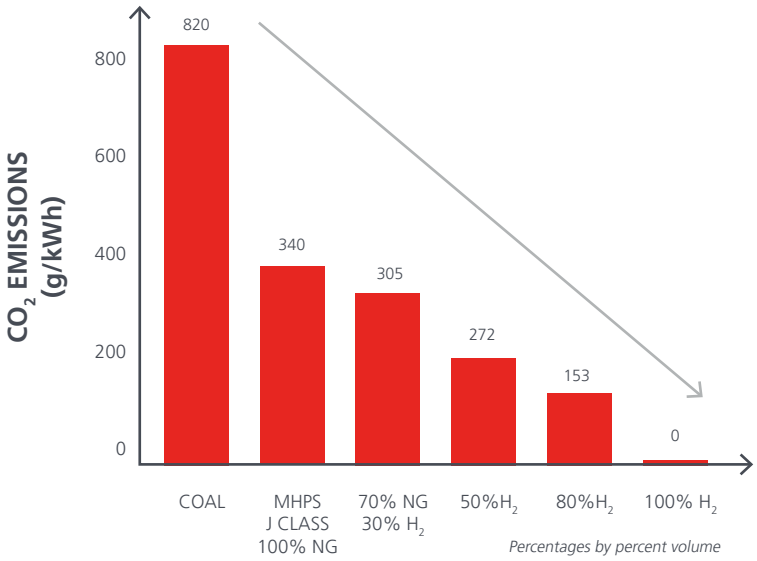
A breakdown of MHPS turbine operating hours by percentage of hydrogen fuel content.



The Road to Clean Energy

The true promise of renewable hydrogen is how it will reduce the carbon footprint of power generation. MHPS turbines using hydrogen fuel mixtures can make an enormous difference in overall carbon emissions—preparing us for a carbon-free future. As more companies adopt this carbon-cutting technology, they'll create power more efficiently and decrease their environmental impact.

Carbon Emissions by Energy Source



Source: U.S. Energy Information Administration

LEADING A CHANGE IN POWER

Changeinpower.com

Mitsubishi Hitachi Power Systems Americas, Inc.
407-688-6100