Enabling an Accelerated and Affordable Clean Hydrogen Future

Michael J. Ducker
Vice President, Renewable Fuels
Mitsubishi Power
OUR MISSION

We will provide power generation and energy storage solutions to our customers, empowering them to affordably and reliably combat climate change and advance human prosperity.
Mitsubishi Heavy Industries: Solutions for a Change in Power

- Hydrogen Ready Gas Turbines
- PV Solar
- Offshore Wind

- Lithium Ion Batteries
- Hydrogen Energy Storage
- Carbon Capture, Utilization & Storage
Surplus and Deficit Signal the Need for More Storage Options

At just 30% renewable integration, peak monthly curtailment exceeds 300,000 MWh.

Seasonal surplus and deficits signal need for long-duration energy storage “beyond the duck curve”
Energy Storage Use Cases: Hydrogen and Batteries

Comparison of Hydaptive™ (Green Hydrogen Energy Storage Systems) and Battery Energy Storage Systems (BESS)

BESS and Hydaptive work in concert to support more reliable and cost effective integration of renewables.
Meeting California’s Carbon Free Goals

**Intermountain Power Project (IPP):**

- World’s First Combined Cycle Designed for Green H2
- Commercial Operation 2025 on 30% Green H2
- 100% Green H2 Operation no later than 2045

**Advanced Clean Energy Storage Project**

- World’s largest renewable storage project … 150,000 MWh
- Safe, reliable, and cost effective storage of Green Hydrogen
- Supports “hard to electrify” heavy transport & industrial verticals

**Two complementary efforts leading a ‘Change in Power’**
Gas Turbine Modifications Required for Hydrogen Power

**ADVANCED TECHNOLOGY**

**Mitsubishi Power J-Series**

- Output: 435MW (60Hz)
- CCGT Efficiency: ~65%
- Reliability: 99.5%
- Units in Commercial Operation: 45

**H₂ GAS TURBINE**

Modifications are only required on the combustion components of the GT.

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The Hydaptive™ package integrates a hydrogen powered CCGT plant and green hydrogen production through electrolysis to provide long-duration renewable energy storage and rapid load response grid balancing services.