ENERGY STORAGE SYSTEM

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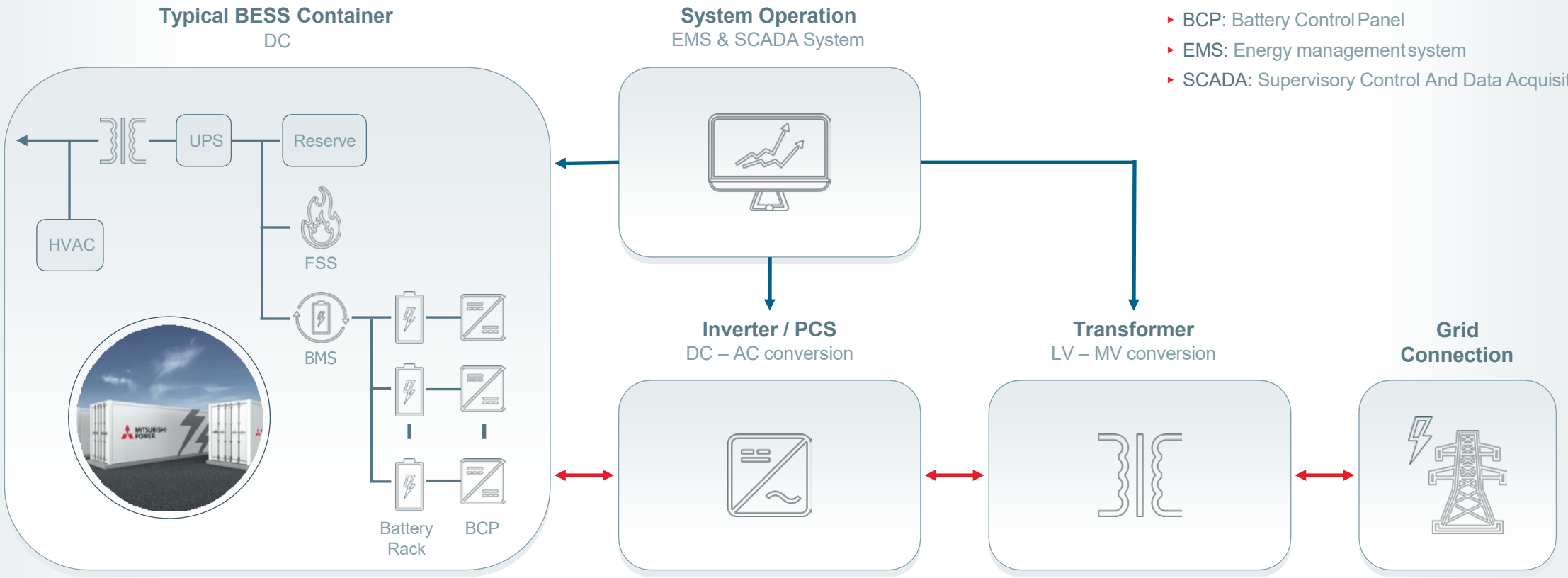
Mitsubishi Power Ltd.

ABOUT MITSUBISHI POWER

We are creating a **future that works for people and the planet**, by developing innovative power generation technology and solutions to enable the decarbonization of energy and deliver reliable power everywhere.

Battery Energy Storage System: FUNCTION DIAGRAM

- HVAC: Heating Ventilation and Air Conditioning
- UPS: Uninterruptible Power Supply
- FSS: Fire Suppression System
- BMS: Battery Management System
- BCP: Battery Control Panel
- EMS: Energy management system
- SCADA: Supervisory Control And Data Acquisition

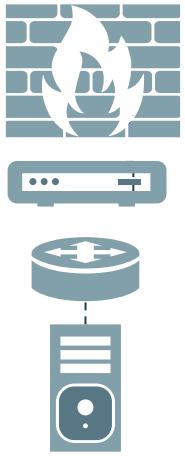


Battery Energy Storage System: EMS/SCADA SYSTEM

CYBER SECURE HYBRID NETWORK ARCHITECTURE

IEC/ISA 62443, NERC CIP

FAST (<20ms) NETWORK RECOVERY



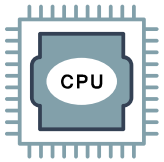
Mitsubishi Power CLOUD 24/7 REMOTE MONITORING

AI BASED ALGORITHMS FORECAST EUIPMENT ISSUES THUS OPTIMIZING LONG TERM PERFORMANCE

RELIABLE, MODULAR & SCALABLE

BUILT IN REDUNDANCY

OPEN STANDARDS



FAST RESPONSE TIME

<15 CYCLES

BMS BALANCING ALGORTHIMS

ALGORTHIMS BALANCING CELLS TO SPECIFIC TARGET INSTEAD OF AVERAGE

FORECASTING

PV Generation

Demand

PROTOCOLS

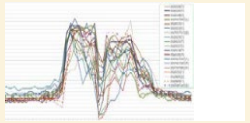
MODBUS TCP

DNP3

Battery Energy Storage System: BESS Optimal Operation System

Demand Prediction

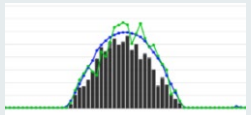
Demand historical data



Operation plan

Equipment data (real time)

RE Generation Prediction



RE generation historical data

Weather Data

Solar radiation & Wind (real time)

Analysis

Optimize use of renewables & BESS

Data analysis with AI

ENERGY Cloud™

TOMONI

Energy Management Guidance

BESS Operation Optimization

Optimization of Sizing

BESS operational History

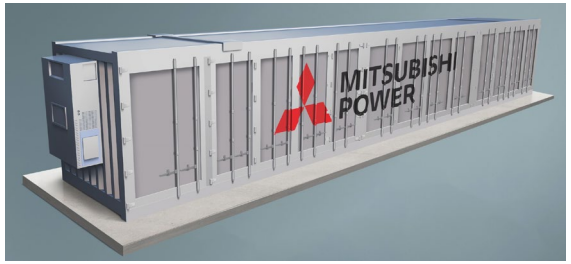
Operation plan including BESS health condition

Visualization

Battery Energy Storage System

Mitsubishi Power Emerges as 2020 Market Share Leader in the Americas for Energy Storage of All Durations

2021-01-13



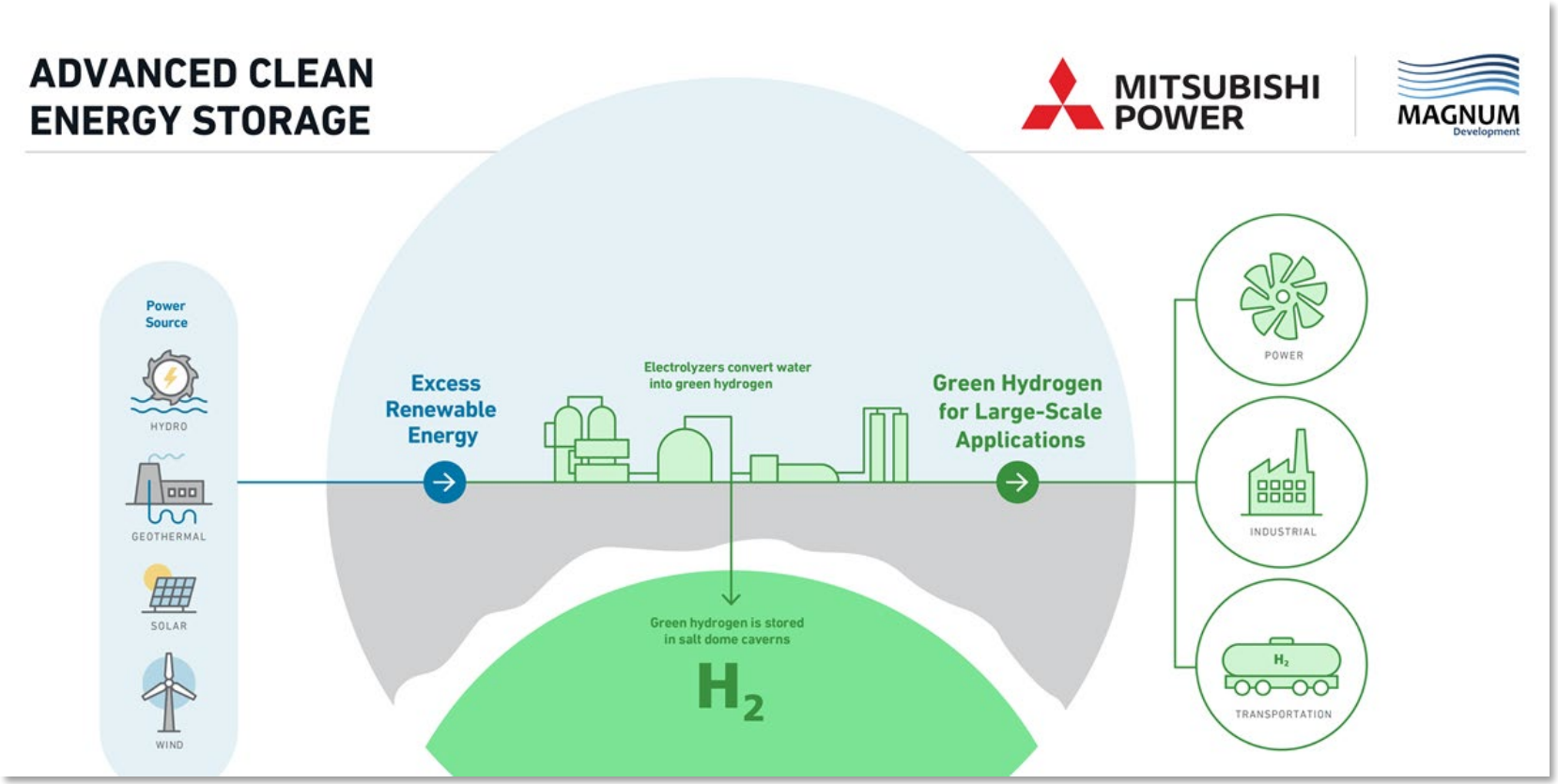
Combined Energy Storage Capacity of Orders Is 151,000 Megawatt Hours

LAKE MARY, Fla. (Jan. 13, 2021) – Mitsubishi Power has claimed the number one market share position in the Americas in 2020 with orders for 151,000 megawatt hours (MWh) of energy storage capacity of all durations. The all-duration category covers utility-scale and behind-the-meter technologies including battery, pumped hydro, and green hydrogen storage. Mitsubishi Power provides both short-duration battery energy storage systems and long-duration green hydrogen energy storage systems to meet customers' decarbonization needs as they deploy deep renewables penetration and need energy storage of various durations.

Mitsubishi Power Americas, Inc. | Mitsubishi Power Emerges as 2020 Market Share Leader in the Americas for Energy Storage of All Durations (mhi.com)

Hydrogen Storage System: Hydrogen Project in USA

USA: INTERMOUNTAIN POWER PLANT



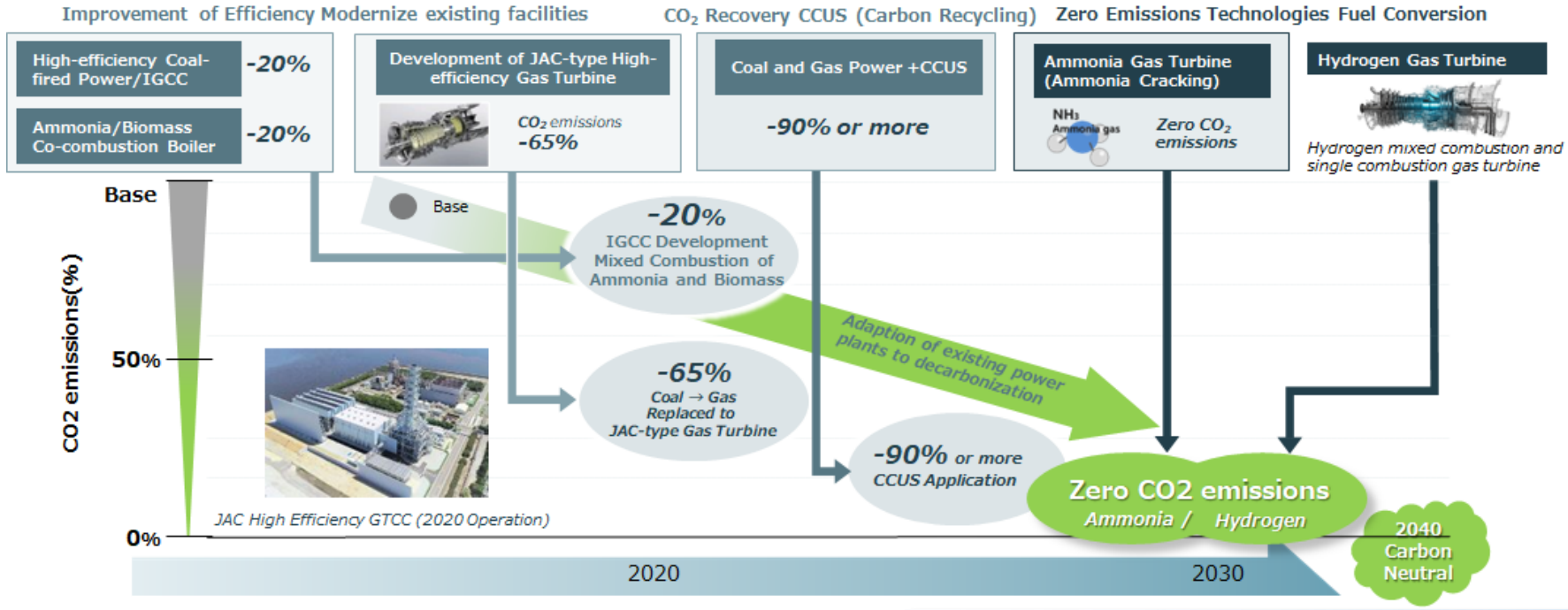
840MW **Intermountain Power Project** (IPP)

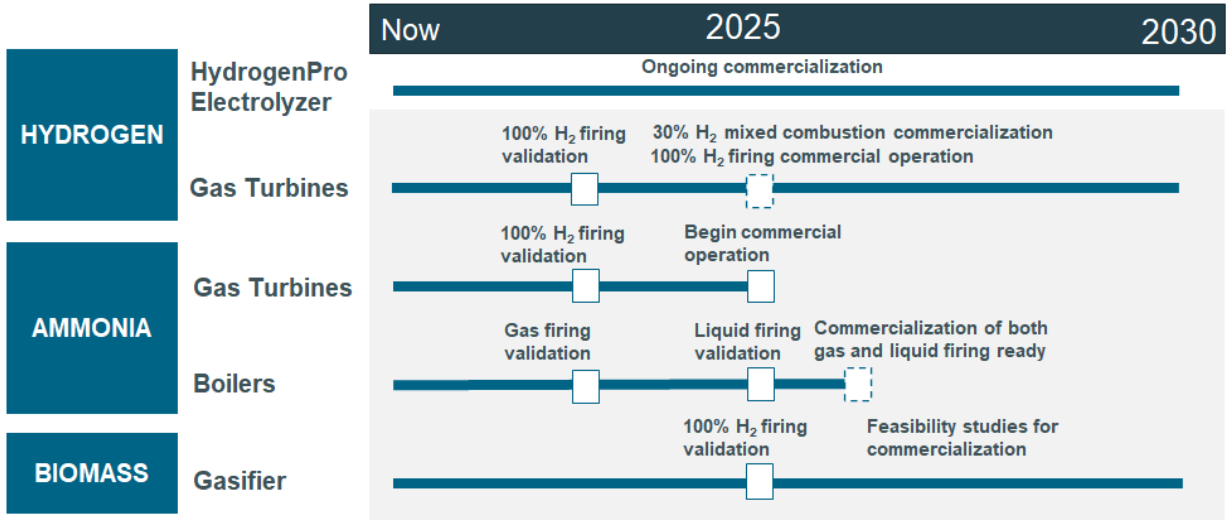
- Retire coal plant to transition to a natural gas and hydrogen blend with **two M501JAC gas turbines**

Advanced **Clean Energy Storage project**

- Received **US$504 million loan approval** from U.S. Department of Energy
- World's largest industrial **green hydrogen production and storage facility** with two salt caverns each capable of storing 150GWh of clean energy

Hydrogen Storage System: Approach to Energy Transition



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