

■ Renewable Power Systems  
for *Business-Critical Continuity*<sup>™</sup>

# Renewable Energy BTS<sup>™</sup> Power System



# Renewable Energy BTS™ Power Solution

Renewable Energy BTS™ Power Solution, an innovated cutting edge technology, provides energy-saving and environmental friendly integrated power supply with energy sources such as wind, solar power, and diesel generator based on enriched experience of Emerson in power industry



## System Components:

- SunnySure™ series solar controller
- Wind power generator
- Solar power panel
- Hydrogen fuel cell

## System features:

- Unlimited renewable energy meeting different power supply requirements in different regions with hybrid power sources of solar and wind
- The leading hydrogen fuel cell energy system with high conversion efficiency and high reliability are easy to be upgraded for future use
- Long life Fe-li battery with good recyclable performance could apply in a wide range of temperature environment
- Up to 10 million kWh electronic power could be saved and about 10,000 tons of carbon dioxide emission could be reduced per 1000 BTS

## Typical Solutions:

### Independent Solar Power Solution

#### Features:

- Applicable in the remote areas without utility power supply
- Energy saving, environment-friendly and pollution-free
- Easy maintenance, no cabling

### Solar + Wind Power Supply Solution

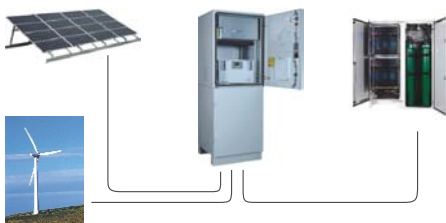
#### Features:

- Applicable in the areas with rich solar and wind energy resources
- Reduce initial investment and improve power reliability
- Energy saving
- Long Battery Life

### Solar + Electric (Diesel Generator) Power Supply Solution

#### Features:

- Widely applicable in the areas with utility power supply
- Energy saving
- Provide reliable power supply and reduce power failure in the areas of unstable utility power supply
- Long battery life
- Optimal solar panel and battery configurations for best initial investment



Emerson Solar Power Controller is the core for the Renewable Energy BTS™. The main functions include: Switching control of solar panel, connection control of wind power generator and diesel generator, battery charging / discharging management, man-machine operating interface and equipment status monitoring.

## Main Features of Controller:

- High reliability, easy to maintain means stable performance and maintenance-free
- 99.6% converting efficiency by using digital lossless control technology
- Protect the batteries and loads via voltage control of monitoring supervision function
- Perfect charging / discharging control prolongs the battery life to a maximum
- High environment-adaptability ensures stable operation at -30°C to 60°C
- IP55 outdoor protection level
- Emergent charging interface for connection to mobile diesel generator
- Easy to communicate with wind power, utility power and diesel generator, and multi-power supply solutions available accordingly
- Wall-mounted or pole-mounted



Embedded controller



Wall-mounted controller

The leading fuel cell energy system of Emerson enables you to cope with increasing demand for electric power. The modular architecture of power generating and system control can realize highly reliable and efficient but low cost backup power solution.

## Features of hydrogen fuel cell system:

- Highly reliable and hot-swappable batteries for selectively turnoff some of the battery compartments. The redundant electronic card improves the reliability of power and interface communication
- Hot-swappable modular battery compartment with easy, fast and tool-free maintenance
- Less maintenance, only need to check gas leakage yearly and add hydrogen accordingly. The checking can be done in a few minutes.
- Environment friendly, generate power and warm water as the result of input hydrogen
- Low noise, less than 60dBA in 5-feet distance
- High adaptability to environment, operation temperature range is -40 to 50°C, and can operate normally under typhoon, frost and other adverse climate conditions



Hot-swappable Batteries



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