

Alternative power supply

Example of the H₂/O₂ PEMFC as a back-up power solution

Increase your Station Black-Out (SBO) coping capabilities with diversified energy solution

The challenge

In case of Station Black-Out the plant operation will require alternative power supply in order to power vital function.

The solution

Framatome supplies containerized autonomous fuel cell backup power systems. The H₂ and O₂ tanks are commonly used at the power plant for various applications. Additional dedicated trailers can be installed to increase the energy autonomy. An electrolyzer can be proposed as an option to refill the tanks.



Framatome's 100 kVA MISTRAL Fuel Cell back-up power system

Greenergy Box™



PEM Electrolyzer

PEM Fuel cell

Our Greenergy Box™ includes both an electrolyzer and a back-up fuel cell

MISTRAL H₂/O₂ Fuel Cell

- Pure H₂ & O₂ PEM FC
- Power : 100 kVA / Unit
- AC tri-phased or DC output
- Weight : 5t (w/o gas storage)
- Can be delivered within its container or installed in a building
- Up to 6 Mistral in parallel

ELECTROLYZER (Optional)

- Hydrogen flow: 10 to 40 Nm³/h
- Pressure: 35 barg
- Operating range: 10 - 100% Pmax

Your performance
is **our** everyday **commitment**

A mobile power solution for high performance applications

References:

A 30 kVA PEMFC backup systems has been tested by the French “Commissariat à l’Energie Atomique et aux Energies Alternatives” (CEA) for more than 80 hours of active operations and over 30,000 hours of stand by.

A 100 kVA system has been in use for more than 6 months at an Framatome facility in Aix-en-Provence



Our systems can work independently from ambient conditions



Our high performance energy systems are easily transportable

Our core expertise

Over 40 recognized experts in fuel cell development

- Architecture and design process
- Electrochemistry and test facilities
- Electrical and control systems
- Mechanical and structural engineering
- Safety, environment
- Qualification and system improvement
- Installation, commissioning and maintenance

Your Benefits at a Glance

- A diversified back-up power solution based on fuel cell technology
- Very high start-up reliability
- Independence towards ambient conditions (polluted environment, waterproof)
- Very low self-discharge and long lifetime thanks to the inerted mode
- Low maintenance requirements
- A modular solution in term of installed power and energy autonomy

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