



HENSOLDT H2-Grid

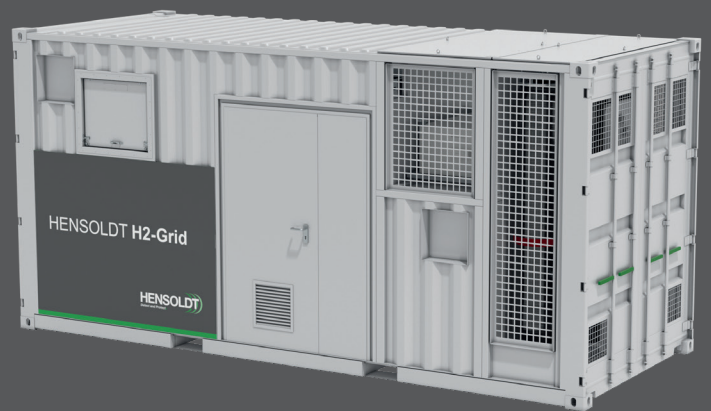
Energy storage and complete autonomy of remote sites and microgrids

Applications

- Camps: military, humanitarian, scientific, telecom
- Antennas
- Air surveillance radars
- Islands
- Off-grid villages
- Rural hospitals
- National parks
- Mining...

Installations

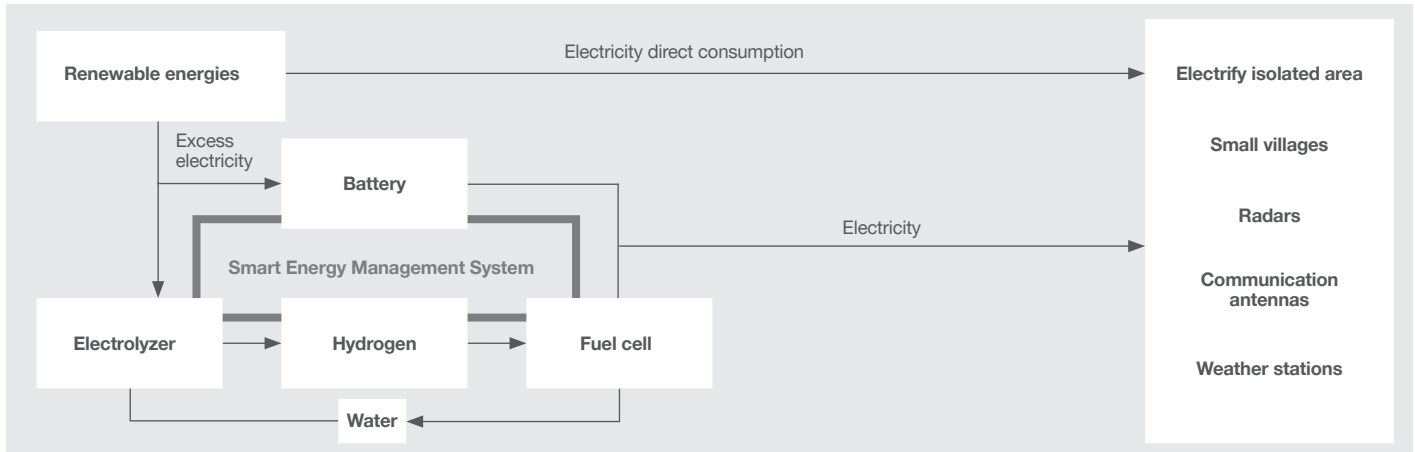
- Can be located almost anywhere
- Perfectly adapted to harsh conditions: tropical regions, saline environments, cold climates, windy areas...
- Everything in one place - no more fuel



H2-Grid

Features and benefits

- Turn-key standalone and container based complete installation for H2 production, storage and electricity production
- Very large storage capacity - over several months
- Continuous and reliable power flow during energy recovery
- Meets the constraints of field installations (reduced space, transport by helicopter, remote control...)
- No environmental impact compared to batteries or gensets (no CO2 emissions and no noise pollution)
- Long lifetime
- Low maintenance
- Remote expertise possible



| Input power | |
|-------------------------------------|---|
| Energy generation | Compatible with all sources of electricity (not included): photovoltaic panels, windturbine, hydroelectric... |
| Battery energy storage and restored | |
| Technology | Li-NMC |
| Maximal power | 50 KW |
| Energy capacity | Up to 96 kWh |
| Reactivity | Immediate |
| Hydrogen production | |
| Electrolyser Technology | PEM or alkaline |
| Nominal input power | 5 to 20 kW |
| Nominal production flow | 1 to 4 Nm ³ /h |
| Hydrogen production starting time | < 5min |
| Water consumption | 1000 L / year |
| Hydrogen storage | |
| Pressure | 500 bars |
| Number of tanks | 1 to 4 |
| Hydrogen quantity | 8 to 34 kg |
| Hydrogen consumption | |
| Fuel cells technology | PEMFC |
| Fuel cell output power | 15 kW, 30 kW or 60 kW |
| Start time | < 5 min |
| Global performance | |
| Autonomy | > 95%* for a power demand of 15 to 30 kW |

*Simulation done for standard consumption profiles

| Energy stored | 150 kWh to 500 kWh |
|---|---|
| Maximum power (with batteries) | Up to 70 kW (three phase) |
| Different modes | |
| Supply of energy for priority needs | |
| Emergency function: backup power | |
| Peak shaving | |
| Energy Management System (EMS) | |
| Priority management | |
| Collection and storing of data | |
| Forecasting algorithms: weather forecast, historical, solar production, historical consumption... | |
| Real time management strategy | |
| Remote access to data / maintenance | |
| Installation & environment / container (tanks included) | |
| Operating temperature | - 10 °C to + 40 °C Option : - 20 °C to + 50 °C |
| Container (tanks included) | 6058 x 2438 x 2896 mm < 10 tons High Cube container |
| Tanks (MAHYTEC) | Internal volume: 200 L External side: Ø48cm x 263 cm (without support) Weight empty: 200 kg Life time: 5000 cycles or 10 years |
| Additional functionality / capability | |
| Hydrogen storage extension | Option: external hydrogen supply interface |
| Hydrogen mobility | Option : green hydrogen distribution station for mobility |