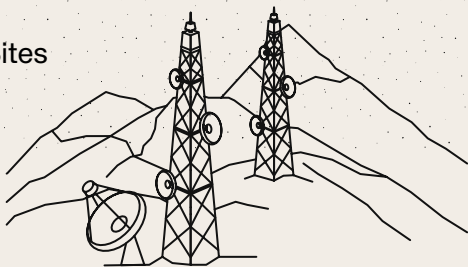


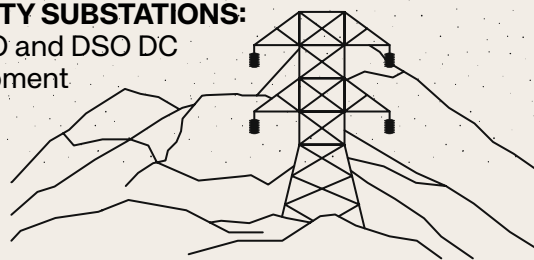
WITHSTANDING WINTER WHEREVER- GENCELL'S LONG-DURATION BACKUP POWER SOLUTION

➔ **RESILIENT & SUSTAINABLE ALKALINE FUEL CELLS
ENSURE UNINTERRUPTED POWER FOR MISSION-CRITICAL
APPLICATIONS IN REMOTE, SUB-FREEZING CONDITIONS**

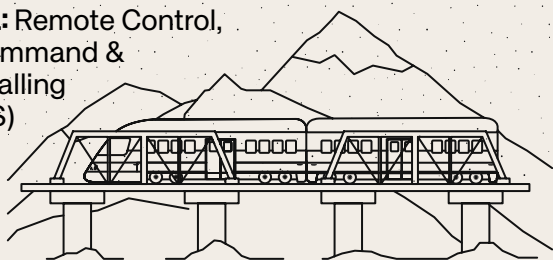
TELECOM:
Remote Sites



UTILITY SUBSTATIONS:
TSO and DSO DC
Equipment



RAIL: Remote Control,
Command &
Signalling
(CCS)



LIGHTHOUSES:
Communications &
Naval Equipment

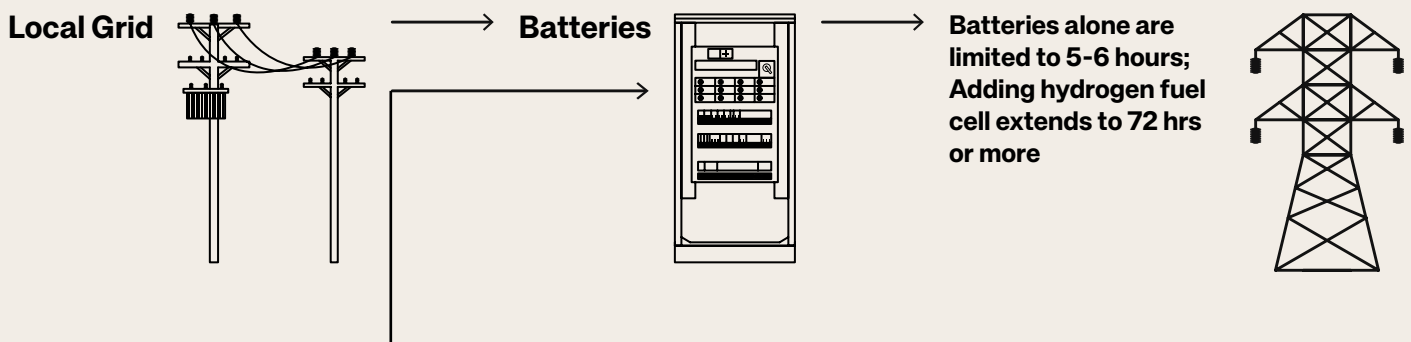


Business continuity of mission-critical applications across industry sectors throughout Europe faces increasingly frequent and severe threats of power outages. The ever-expanding volume of volatile wind and solar PV power being added to Europe's electricity networks inherently introduces grid instability, especially for aging infrastructure that is already vulnerable to interruptions. Snowstorms, avalanches, unseasonably cold and freezing temperatures, and other natural disasters made more common due to climate crisis only exacerbate the already high risk. Geopolitical disruptions to fuel supplies and cyberattacks add further uncertainty and challenges to power security. In these circumstances, reliable, long-duration backup power of 72 hours or more is becoming crucial - and for many European countries and institutions - **mandatory**.

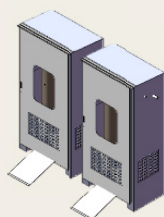
GENCELL® BACKUP POWER SOLUTIONS BASED ON ALKALINE FUEL CELL TECHNOLOGY ARE ENGINEERED TO OVERCOME THESE RISKS.

IDEAL TO POWER CRITICAL EQUIPMENT POSITIONED AT OUTDOORS SITES IN EXTREMELY COLD CONDITIONS

- ↳ Robust, reliable alkaline fuel cells are weatherproof, needing minimal servicing and maintenance;
- ↳ Equipment in shelter can operate while buried under deep snow, while hydrogen supply is stored outdoors;
- ↳ Cold Start Mechanism allows fuel cells in sub- zero temperatures to site-idle with NO thermal conditioning or test runs; unit starts up in under an hour using minimal to no battery power



H2 Supply



BOX/REX

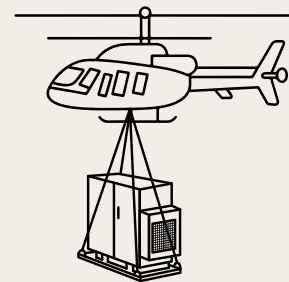


120 kWh per day
48 / 130 VDC



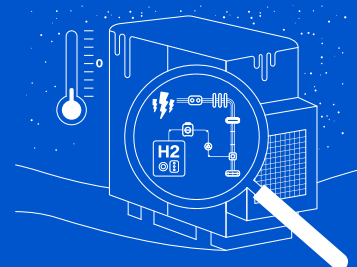
DESIGNED TO FACILITATE DEPLOYMENT IN REMOTE AND DIFFICULT-TO-ACCESS LOCATIONS:

- ↳ All equipment has been rigged and tested for transport via helicopter;
- ↳ Gas cabinet modular as per backup duration requirements, single-cylinder replacement maximizes on-site fuel store;
- ↳ Refueling by helicopter (optional)
- ↳ Transport platform expedites equipment lift by helicopter

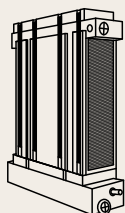


For conditions below the standard operating temperature of -20° , GenCell has also developed and delivered an advanced cold start mechanism to activate the fuel cell in temperatures as low as -30°C using minimal heating.

Alternative backup power solutions require costly continuous preheating to kick-start their operation in sub-zero weather. If not preheated, they may not start or experience damage. This consumes many hours of available grid or battery power. GenCell's cold start mechanism enables the fuel cell to initiate from -20° in under an hour without preheating.

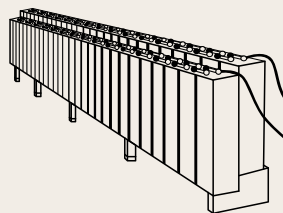


	GenCell BOX™ and REX™
Cold Start Kick-in Duration	Up to 60 mins
Battery Energy Consumed	Minimal
Impact on OpEX	30% savings



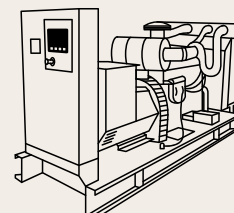
PEM FUEL CELLS

- ↳ Freezing of moist membranes can damage PEM stacks
- ↳ Constant thermal conditioning
- ↳ Frequent test runs
- ↳ FCs and H₂ stored indoors poses safety risk



BATTERIES

- ↳ Must be commercially oversized to support 72 hrs backup
- ↳ Constant preheating
- ↳ Large Footprint



DIESEL GENERATORS

- ↳ Reliability dependent on servicing for secure start
- ↳ Constant thermal conditioning
- ↳ Maintenance-intensive
- ↳ Pollutant fuel degrades in cold and must be regularly replaced

EMBEDDED GENCELL GEMS EDGE MONITORING AND MANAGEMENT SOFTWARE MINIMIZES ON-SITE VISITS:

Visibility & Operational Intelligence across Remote Sites

- ↳ Remote control and monitoring
- ↳ Interface protocols
- ↳ Remote health check
- ↳ Remote fuel level reporting and management
- ↳ Remote troubleshooting and service
- ↳ Remote maintenance preparation and coordination



PROVEN EXPERIENCE AT 100+ DEPLOYMENTS ACROSS 23 COUNTRIES

- ↳ Field experience at remote telecom towers and communications networks for world-class cellular operators
- ↳ Large-scale utility substation backup program across 102 sites at State of Mexico-owned utility CFE
- ↳ Soon to be deployed at large-scale European border control project
- ↳ Partnership approach drives close engineering collaboration with customers such as Deutsche Telekom and CFE



GENCELL ENERGY



(TASE: GNCL) develops GreenFSG power solutions based on reliable, zero-emission alkaline fuel cells, Hydrogen2Power™, Ammonia2Power™ and Water2Power® technologies that deliver uninterrupted power to help the world #SayNoToDiesel and transition to clean energy. The ability to produce not only clean power from GenCell's fuel cells, but also the green fuel on which the fuel cells run, sets GenCell in a far superior position as a well-to-wheel total green energy solution provider. GenCell delivers resilient, robust and weather-resistant backup power for utilities, telecom, EV charging and other mission-critical applications which have been deployed in 23 countries. Going ahead, we are designing an ammonia-based hydrogen-on-demand solution to provide economical primary power for off-grid and poor-grid sites, as well as for rural electrification.

GenCell numbers some 130 employees, including veterans of space and submarine projects. The Company is headquartered in Israel with a worldwide distribution and support network and retains unique intellectual property that includes patents, trade secrets and know-how.

↳ **CONTACT US**

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