

Fuel-Cell Hybrid Power System

CAPABILITY SHEET - SILENT FIELD POWER - ENGINEERED TO ORDER

THE SYSTEM

WHAT	A fuel-cell + battery hybrid running on supplied hydrogen - silent, low-signature 230 VAC power for a forward or high-altitude post where a diesel genset is a liability.
OUR ROLE	Neometrix integrates the system - hydrogen storage, battery, power electronics, energy manager and rugged enclosure; the fuel-cell stack and battery cells are bought-in.
STATUS	Engineered to order; sized to the load, runtime and platform. No specific delivered system is claimed on this sheet.

THE POWER CHAIN

HYDROGEN	Hydrogen is supplied - compressed cylinders or metal-hydride - stored and regulated to the stack; sized to runtime and resupply, not made on site.
FUEL CELL	The fuel-cell stack combines hydrogen and air into DC power, water and a little heat - near-silent, no combustion, sized to the base load.
OUTPUT	Power electronics - DC-DC and inverter - deliver clean 230 VAC and a DC bus, from ~3 kVA modules scalable to larger hybrid augmentation.

THE HYBRID

BATTERY	A battery on the DC bus covers peaks and transients and lets the fuel cell shut off for a silent overnight watch; the fuel cell recharges it.
SILENT + LOW-SIGNATURE	Near-silent, low thermal signature and no exhaust - and no altitude derate, unlike a diesel engine - the point of the whole system forward.
ENERGY MANAGER	A controller orchestrates the fuel cell, the battery and any solar or DG input for runtime, efficiency and load-following.

DISTINCT & HONEST

vs P2P	Distinct from our stationary P2P energy-storage system, which makes its own hydrogen with an electrolyser; this is deployable and consumes supplied hydrogen.
DEFENCE VALUE	Fuel cells invert the diesel generator's liabilities forward - noise, heat, exhaust and fuel runs - which is why forward posts want silent, low-signature power.
ENGAGEMENT	Send the load, the runtime and the platform to sales@neometrixgroup.com for a clause-by-clause compliance matrix in two working days.

DEFENCE PROGRAMMES DESK

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