

# Xstorra<sup>®</sup> II Solar-Hydrogen System



Mobile Solar Combined with XStorra II Hydrogen Energy Storage provides power 24/7

Infinity<sup>™</sup> Solar-Hydrogen System Reduces or eliminates fuel convoys



- Humvee towable system
- 24/7 Power from solar with hydrogen storage
- Rugged deployable systems
- Plug-and-play deployment
- Low noise/thermal signature
- Modular Design for expandability

Infinity Fuel Cell and Hydrogen, Inc. 431A Hayden Station Road, Windsor, CT 06095 Ph (860) 688-6500 Fax (860) 688-6511 www.infinityfuel.com

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## XSTORRA Mobile Solar Hydrogen Energy Storage System Specification

#### Overview:

The XSTORRA System is a fully integrated off-grid renewable energy storage and delivery system. The system is comprised of two M103 trailers packaged with a fold-out 5kW solar array on one trailer and an energy storage system and control module on the second trailer. Excess solar power is converted into high pressure (2000psi) hydrogen stored on the vehicle in lightweight carbon fiber tanks. The stored hydrogen can be used to supply a 5kW fuel cell for distributed power generation or the hydrogen could be used to fill balloons for artillery range or communications applications. Additionally, a connection to diesel generators is provided to utilize wasted generation capacity for later use via the fuel cell when generator sets are operating on partial load or standby modes. An on-board MPPT/controller manages power distribution from storage in batteries or hydrogen to direct solar power feed and/or fuel cell power.

### Solar Specifications:

- 5 kw output
- 18 solar panels mounted on a lightweight aluminum structure
- One person can open the panels and operate the hydraulic controls to unfold and tilt the solar array to optimize energy capture. 5kW in 15 minutes.
- Automatic hydraulic leveling/stabilization system for the trailer including leveling foot pads for soft surfaces.
- Hydraulic deployment and panel tilt system with cabled operating control switch including 24 volt battery and charging system.

### Storage and Control Trailer

- 5kW high pressure electrolyzer module with 2000 psi output pressure including feedwater and polishing system.
- 5kW PEM fuel cell module
- 4 kWh battery control buffer storage system.
- Integrated system controller
- 30+ kWh hydrogen storage capacity

#### Inputs:

- Power from solar trailer
- 3-Phase 220VAC (optional input)

### Outputs:

- 110 VAC, 2 circuits each 20a GFI
- 4000W nominal 6000W surge
- Hydrogen gas for balloon filling

