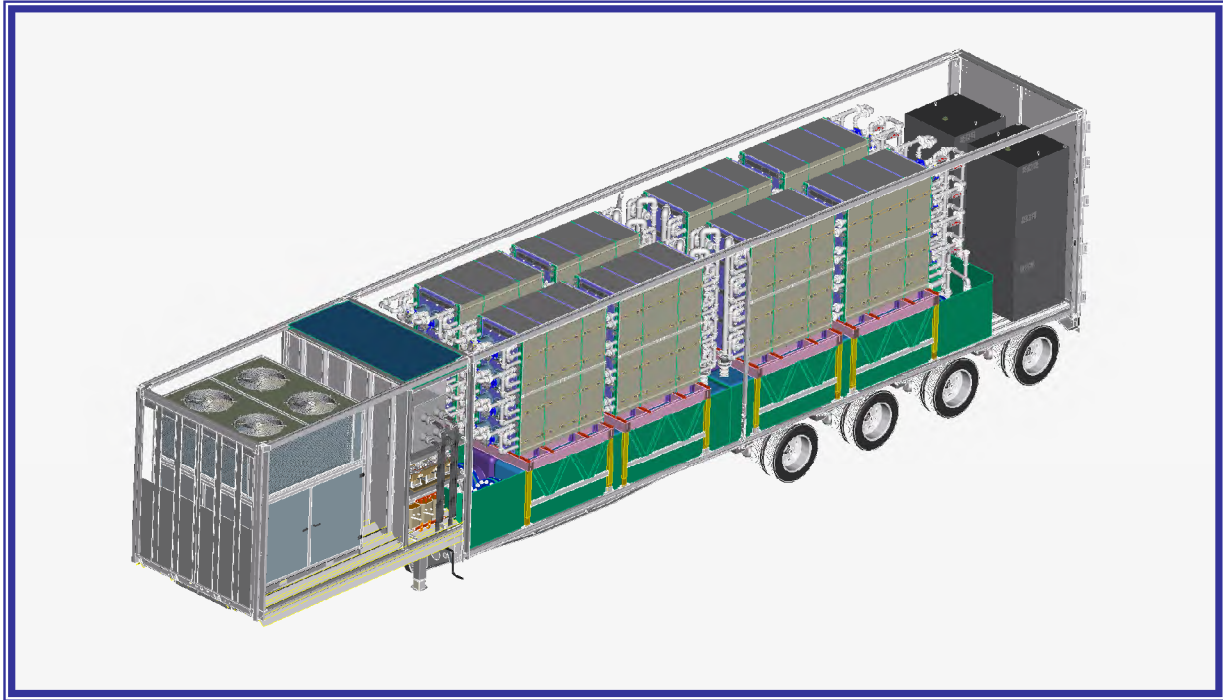




TransFlow 2000

Utility-Scale Mobile Energy Storage System



PREMIUM POWER'S TRANSFLOW 2000 DELIVERS THE MOST FLEXIBLE & EASY TO INSTALL, FULLY INTEGRATED, LARGE-SCALE ENERGY STORAGE SOLUTION.

Integrated, Turnkey Solution

Premium Power's TransFlow 2000 is a fully integrated system that comprises energy storage, power conditioning, system control and thermal management subsystems packaged into a portable, turn-key, building block to be placed wherever it is needed for immediately dispatchable on-line energy storage. Systems can be placed outdoors or indoors.

Each system has the capability to store up to **2.8MWh** of energy and instantly dispatch at **500kW** for at least **5 hours**.

Zinc-Flow Advantages

The TransFlow 2000 is a low cost solution that delivers the required performance at an affordable cost without endangering our environment.

This is made possible because of Zinc Flow technology's unique advantages:

- **Low initial cost** – major components use consumer-grade plastic
- **Low maintenance needs / costs** – equivalent to \$0.004/kWh
- **30+ year life**
- **Unlimited cycling** - including 100% and partial discharges
- **Environmentally friendly** – 100% recyclable or disposable



Applications

The TF2000 meets the needs of:

• **Electric utilities:**

- Substation T&D asset deferral
- Distribution system load support
- Peak shaving
- Demand response management
- High quality power output
- Energy arbitrage
- Ancillary services

-increasing system reliability and operational flexibility while reducing carbon emissions and enabling new business opportunities via innovative engagements with customers.

• **Renewable energy generators:**

- Time-shifting of generated energy
- Energy arbitrage
- Ancillary services

System Configuration

The overall system comprises four fully integrated subsystems:

- Energy Storage – including storage blocks, electrolyte tanks, and pumps.
- Power Conditioning – includes four 125kW grid-tied inverter/rectifiers and grid interconnections.
- System Controller – provides real-time monitoring, control, management and communication, with remote access.
- Thermal Management – provides active control of temperature for all system components

Grid Interconnection

Each TransFlow 2000 has four 200A Hubble Insulgrip connectors using AWG 4/0 Type SC UL rated flexible cable. AC disconnect switches are provided for all trailer and PDN connections.

Specifications

Performance:	
Energy Storage Capacity:	2.8 MWh
Voltage Input (3-Phase):	480VAC, 60Hz
Voltage Output (3-Phase):	480VAC, 60Hz
Maximum Continuous Power Delivery:	500kW
Power Factor (Input):	+/- 0.95
Voltage Harmonics:	Approx. 1.5% THD
Physical:	
Length:	53' (16.15m)
Width:	8.5' (2.59m)
Height (including trailer wheels):	13.5' (4.11m)
Weight (including electrolyte and trailer):	108,000 lbs (43,545 kgs)
Safety:	
Underwriters Laboratories	UL 1741
Federal Communications Commission	Part 15, Class A
National Fire Protection Agency	NFPA 1 & 70

Remote System Management

Web-based remote monitoring enables operator access to continuously monitored parameters, with automated notification by page, text-message or e-mail in the event of a fault condition.

Autonomous system control enables power and load to be continuously monitored and storage charged or discharged according to parameters that can be remotely preset by the user.

Energy Management application makes buy (charge) or sell (discharge) decisions based on real-time wholesale market pricing and user configurable parameters.

Premium Power Corporation

87 Concord St., North Reading, MA 01864, USA

T: 978.664.5000 • F: 978.664.5022 • info@premiumpower.com • www.premiumpower.com