

TROES

The Revolution of Energy Storage

A Canadian Company focusing on Distributed Energy Storage Technologies, Products & Solutions

Energy Storage for Transportable NWAs: Mobile Substation

Trends

"Due to capacity constraints in existing substations, new and existing consumers who need additional electricity are rejected before substation upgrades can take place."

- IEEE Open Innovations Conference, 2018

Challenges

How to ensure uninterrupted power supply during transmission and distribution line overhauls that have lengthy timelines? How to compensate for inadequacy of substations for growing load demands? How to ensure backup supply in emergency conditions?



TROES' SOLUTION:

TROES' Battery Energy Storage in conjunction with a mobile substation can provide uninterrupted power, compensating for capacity constraints of existing substations. The unit can be relocated to sites with power inadequacies and support seasonally peaking demands.

Capacity Firming

Supply power to meet growing load demands

Quick access for service

Minimum clearance for utilization; demand-based relocation to multiple sites

Capital Deferral

Interest savings from deferred investments

Peak shaving

Meeting load demands with BESS during peak hours

Mobile Substation w/ Battery Energy Storage System 27.6kV, 3 ph/4148 kWh

This Non-Wire Alternative System can be relocated between substations to reliably provide power, compensate for inadequate systems or provide backup in emergency conditions.

Includes:

- 480 V~27.6 kV 1 MVA MV Transformer
- Battery Energy Storage System (Scalable)
- Power Conversion System
- MV/LV Switchgear/Protection
- 53ft flat bed sub-trailer

Our proprietary battery designs include a Battery Management System (BMS) with 3-layers of control and 3-layers of operation protection and an AI powered Dual-Equilibrium™ Technology, proven to improve battery lifecycle & overall system efficiency.

Specifications

Model	TC-2000-4148
Battery Technology	Lithium Iron Phosphate battery (LiFePO ₄)
C-Rate (charge/discharge)	0.5C/0.5C
Installed energy capacity	4148kWh
Rated Energy Capacity	3475kWh
Rated DC Voltage	768V
DC Voltage Range	672V-864V
DC Current Rating	270A*20
Auxiliary AC Voltage	27.6kV, 3 phase
Utility Frequency	60HZ
Battery Efficiency	98%
Operating temperature	-20°~50°C
Enclosure type	Outdoor Container
Thermal Runaway Protection	Yes
Communication protocols	TCP/MODBUS/RS485
Cycle life	8200 cycles @80%DoD (0.5C/0.5C, 25°C)
BESS Dimension (W*D*H)	53 ft trailer*2
HVAC	Air-conditioning
Color	RAL 7035 Grey White/RAL9005 Black
Compliance standards	Battery Cell: UL1642 Battery Packs: UL1973, UN38.3

TROES
The Revolution of Energy Storage

3600 Steeles Ave. East
Markham, ON L3R9Z7
Canada



1-888-99-TROES (87637)



info@troescorp.com



www.troescorp.com