



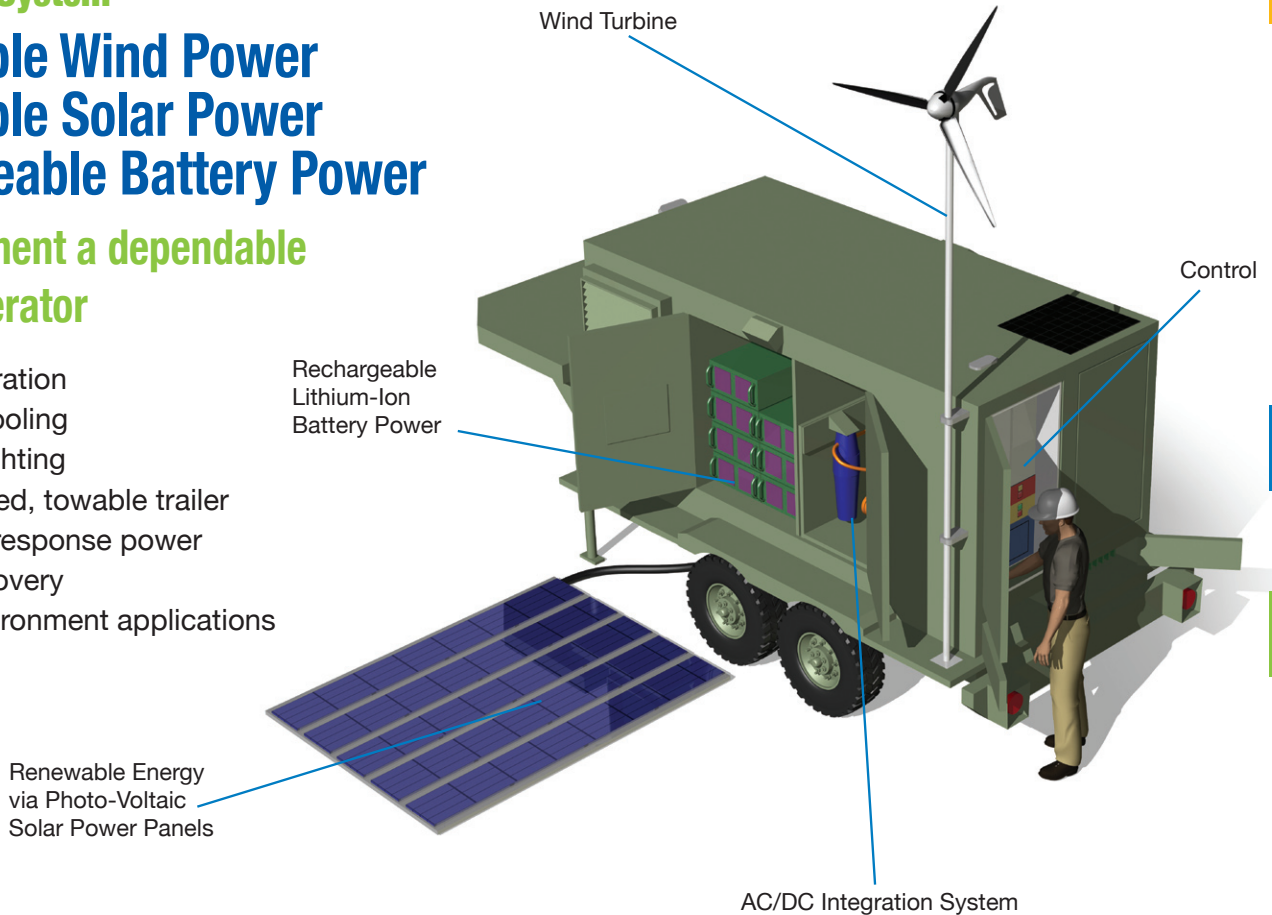
## Renewable Energy Mobile Utility System

### The REMUS System

# Renewable Wind Power Renewable Solar Power Rechargeable Battery Power

## All supplement a dependable diesel generator

- Power generation
- Heating & cooling
- Perimeter lighting
- Self-contained, towable trailer
- Emergency response power
- Disaster recovery
- Remote environment applications



**REMUS** provides utility scale electrical services powered first and foremost by a rugged and dependable diesel generator but then supplemented by wind power, solar power and a rechargeable battery. The alternative power sources decrease the need for large amounts of diesel fuel, which is especially helpful in disaster areas and difficult-to-access environments.

**REMUS** is easy to deploy, easy to operate, and easy to maintain. Its pre-engineered modular design permits flexibility never seen before in emergency response power generation technology.

The **REMUS** system delivers AC power from its generator and coordinates three different DC inputs (from renewable resources) allowing the system more flexibility and reducing the operating cost.

**REMUS** also contains a rechargeable lithium-ion battery system which when fueled by renewable energy, sustains power output even in the event of a diesel fuel shortage.

The **REMUS** lithium ion battery pack can also be recharged with the on-board 40 kW diesel generator.

The **REMUS** system is designed to provide a pre-engineered, pre-packaged multiple utility command system less dependent on traditional fuels, particularly in emergency situations and remote locations where continued fuel sources are limited, not available, or too costly.

**REMUS** is a product of Titan Energy Development, headquartered at the NextEnergy Center in Detroit, Michigan.

For more information, please contact Tom Black at Titan Energy Development.  
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# REMUS Renewable Energy Mobile Utility System

## Product Specifications

### General

#### Size & Weight

Overall W x L x H (in): 89.5" x 196.86" x 102"  
Overall Weight (lbs) - dry: TBD  
Overall Dry Storage Space (in): TBD

#### Enclosure

Overall W x L x H (in): 69" x 160" x 61"  
Material: Aluminum  
Gauge / Thickness (in): 0.09

#### Paint

Enclosure: Mil-DTL-64159  
Type: 2 Coating  
Military Green

Trailer: Mil-DTL-64159  
Type: 2 Coating  
Military Green

### Engine / Generator

#### John Deere Heavy Duty Diesel Engine

Model: 4024HF285  
Type: 4-Cycle  
Aspiration: Turbocharged Air to Air  
Cylinder Arrangement: 4 inline  
Maximum Power:  
Standby=40 Prime=35  
Ambient Capacity of Radiator (°F): 122

#### Liquid Capacity

Total Oil System (gal): 2.1  
Engine Jacket Water Capacity (gal): 0.68  
System Coolant Capacity (gal): 3.00

#### Electrical System

Electric Volts DC: 12  
Cold Cranking Amps: 750 (under 0°F)  
Net Electrical Output (kW): 40  
Frequency (Hz): 60  
Generator Speed (RPM): 1800  
Standard Output Voltage (AC): 120/208  
Exhaust System: Critical grade muffler

#### General:

- Single side service
- Output circuit breaker & enclosure
- Oil make-up system

### HVAC System

#### Air Conditioning System

HFC R-134 no-ozone depleting system  
Compressor: Open drive reciprocating w/  
magnetic clutch  
Evaporator & Condenser Fan:  
SWSI BC Class II Industrial  
Motor (hp): 15 (@ high efficiency ODP)

#### Cooling Performance:

7.5 tons @ 100% OA conditions (90/84°F)

#### Heating Performance:

w/6 Kw electric heat option  
112,000 BTU output (37.5° rise)  
146,000 BTU output (45° rise)

Air Duct: (2) 16" diameter x 25' length  
(PVC-Coated Polyester)

### Fuel System

Fuel Tank Size (gal): 65

#### Fuel Consumption:

100% load: 3.7 GPH  
75% load: 2.8 GPH  
50% load: 1.9 GPH

### Trailer

#### Size & Weight

Overall W x L x H (in): 85.3" x 230.7" x 74.8"  
Overall Weight (lbs): 3,300  
Tongue Weight (lbs): 235  
Ground Clearance under Axle: 26"

Payload Capacity (lbs): 6,500  
Fuel Tank Size (gal): 65

#### General:

- Leveling jacks & inclinometer
- Electric brakes

### Control Panel

#### General:

- Engine Gauges and Generator Metering
- Alarm Indicators: Unit not in Auto
- General Emergency Stop Buttons

### Fire Extinguisher

Rated Temperature Range (°F): 40°F to 120° F  
Weight (lbs): 8 lbs 10 oz  
DOT Requirements: Standard  
Pressure (PSI): 585

### Battery System

Model: SAFT Lithium Ion Battery

Overall Size: W x L x H: 18.5" x 35" x 9"

Weight (lbs): 310

Normal Voltage: 240-295 DC

Battery Life: 30 Amp Hours

Operating Temperature Range: -30°C to 60°C

### Wind Turbine

Model: Southwest Wind Power 400 watt Turbine

#### Size:

Rotor Diameter (in): 46"  
Weight (lbs): 13  
Power: 48 Volt D.C.

Telescoping Tower Size: 7' up to 20'

### Solar PV System

Model: Solar Integrated

3.26 kW Deployable Photo-Voltaic

Equipment: Approx. (12) Solar Panels

Size: W x L x H (in): 78" x 108" x 1.25"

REMUS is a product of **TITAN ENERGY WORLDWIDE**, headquartered at the NextEnergy Center in Detroit, Michigan. For more information, please contact Tom Black at Titan Energy Worldwide • 248.446.8557 • tblack@titanenergy.com

**NextEnergy**, Michigan's alternative energy accelerator, is a non-profit corporation dedicated to enabling the commercialization of energy technologies that positively contribute to economic competitiveness, energy security and the environment. NextEnergy drives technology collaborations, supplier diversification, progressive energy policy, and new business venture support to position Michigan as a leader in the emerging alternative energy industry. For more information please visit [www.nextenergy.org](http://www.nextenergy.org).



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