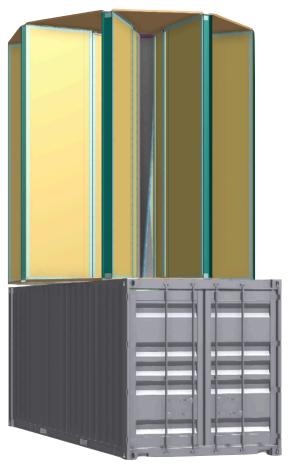


# Crisis Response

CR-02000 Series Emergency Wind Energy System



Crisis Response System shown deployed atop its CONEX Box.
(Anchors cables not shown.)

# **Clean Power for Austere Conditions.**

Ships easily, deploys quickly, withstands extreme abuse, simple to maintain.

## Infrastructure in a Box

Provides ready-to-connect emergency power for long-term field usage.

Includes wind generator, battery storage, and power connections all in one box.

Hardened construction: Survives austere conditions and extreme weather events.

Simple to transport wind energy structure mounts to its own 20' CONEX box.

- Ships knocked down, fully wired, complete with all tools needed to deploy.
- Designed to be deployed by 4-person crew without heavy equipment.
- Needs no foundation or precise leveling. Anchors and guy wires included.

Power curve tailored to emergency applications:

- Designed to produce approximately 20kWh daily typical min.
- Oversized wind intercepting enclosure begins generating power at very low wind speeds.
- Variable Load Generator Array (VLGA) optimizes power production at high wind speeds and provides redundant generators for increased fault tolerance.

Eliminates need for fuel. Reduced fuel costs, lessens logistical support burden.

Enables power in forward, austere environments. Optimized for field assembly.

Patented (US 10,495,063). Tested with University of RI

Flight Operations Compatible: Ground mounted, stationary structure. No radar disruptions.

## Construction

- Wind energy enclosure comprised of composite structural framework with high performance, polymeric geomembrane aero surfaces.
- Prewired charge controller, Li Ion battery storage, and external power connections.
- Rotor comprised of aluminum airframe and skin.
- CONEX box is standard steel 20'CEU shipping container modified to suit

# **Technology Summary**

## **Revolutionary Approach To Wind Energy Capture**

The sails of the CR Wind Energy System intercept the wind, create a vortex and focus its energy in a chamber at the center of the enclosure.

The fortified, hidden-in-plain-sight stationary structure harvests wind from all directions. Does not need to be pointed into wind.

70 year design life. Survives 200mph winds.

Produces 2x power of typical alternative energy technology.

Silent, stationary, no shadow flicker, people and wildlife friendly. Blends in with built-environment.

#### **Dynamic Chamber**

At the center of our enclosure is a chamber housing the rotor. The chamber dynamically changes size and shape responding to ambient wind speed and direction, optimizing air flow and power production.

## **Easy Deployment**

Ground mounted. No tower or foundation, connect with solar arrays.

#### **Next Generation Rotor**

Our revolutionary, lightweight high performance rotor starts at lower wind speeds, stable at high wind speeds and is designed to drive multiple redundant generators.

#### Minimum Maintenance

All units are designed to operate in extreme and harsh environments with minimal maintenance.

Deployment, operation and maintenance training included

10-year warranty and optional Investment Protection Program extended warranty and service / maintenance program.

Proudly 100% Made in the US.

#### **Company Information**

CAGE CODE 8HFH9

UEI W7MYFTTHZJP7

Web Address www.cbcwindenergy.com

# **Model Information**

Model No.	CR-02000
Design Lifetime	70 years
Foundation Type	No foundation required, Anchored Conex Box
Orientation	Stationary enclosure
Yaw System	N/A - Dynamic chamber mechanically adapts to changes in wind speed and direction.
Weight (including CONEX box and Battery Storage)	

Noise Level Silent

(0 dB above ambient at 0 ft from equipment.)

# **Environmental Specifications**

Min Temp	-40 F
Max Temp	115 F
Humidity and Corrosion	All materials are non corrosive. Enclosure designed to suffer airborne particulate matter including sand and ice.
Lightning	Lightning rod and electrical surge protection included.

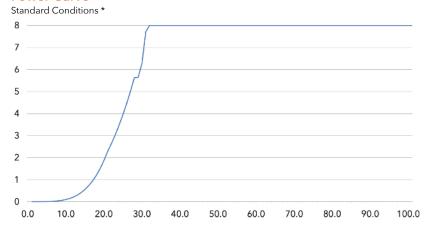
# **Electrical Output**

Generator Type and Drivetrain	Variable Load Generator Array (VLGA) with serpentine belt power transmission.
Output	15.5VDC to charge controller. Inverter options and external power connections available, contact factory to specify. Electrical system prewired at factory.
Battery Storage	Li lon Batteries standard. Customer configurable, contact factory.

## **Performance**

Cut In Wind Speed	8 mph
Cut Out Wind Speed	100 mph
Max Survivable Wind Speed	200 mph
Rated power v. Wind speed	2 kW @ 20mph 8 kW @ 30mph

### **Power Curve**



# **Average Monthly Production**

Avg. Annual Wind Speed (mph)	Energy (kWh/mo)
8.0	85
9.0	135
10.0	202
11.0	288
12.0	392
13.0	515
13.5	583

<sup>\*</sup> Standard conditions: air density 1.225 kg/m³, equivalent to 15°C at sea level.

## **Dimensions**

