風KAZE POWER

VCCT Wind Turbine

Project Update

Kaka’ako
Kalaeloa

January 2026

風KAZE
POWER

Presented to

Department of Business, Economic Development & Tourism

Hawai'i Community Development Authority

風 KAZE POWER

Advanced Wind Power Solutions & A Scalable Hybrid Platform for Renewable Green Energy

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www.kazepower.com

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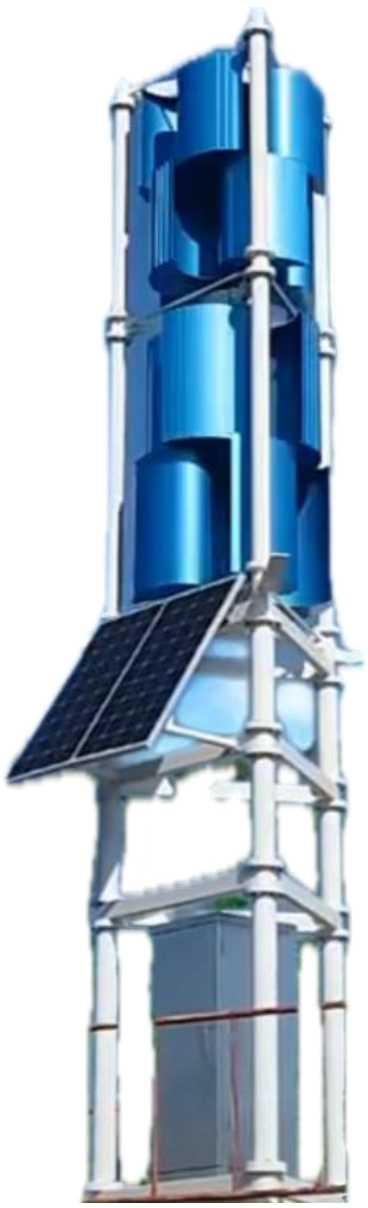
info@kazepower.com



Products & Services

- 風 VCCT Wind Turbines
- 風 Battery Storage Systems
- 風 Solar Panel Support Systems
- 風 Telecommunication Support Systems
- 風 Feasibility Studies
- 風 Project Design
- 風 Installation Services
- 風 Maintenance Services

VCCT TECHNOLOGY

VERTICAL COAXIAL CONTRA-ROTATING TWIN BLADES (VCCT)

USA patented, scalable VCCT wind power generation system

Supports power generation from a wide range of velocities and functions with omni directional wind

VCCT resolved the low-frequency noise issue (<40dB), shadow flickering and damage due to bird/bat strikes, which are inherent problems found in conventional propeller wind generators currently deployed and disputed throughout the world

Producing little to no vibration allows it to be mounted on the roof

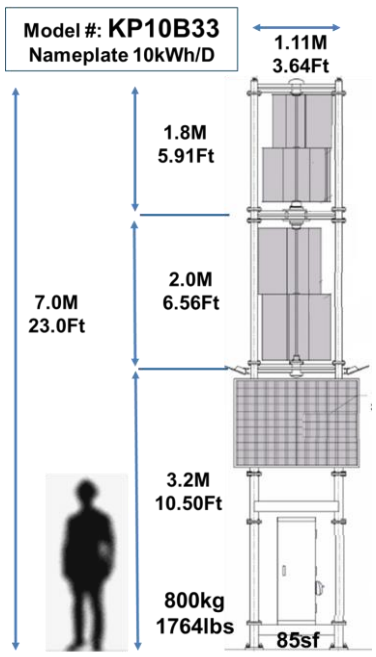
THE VCCT SOLUTION

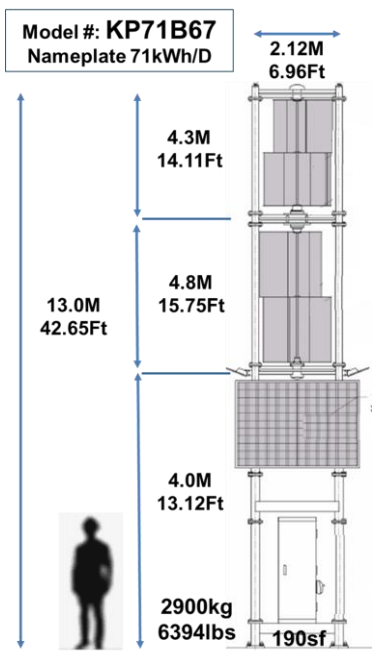
- Beautiful Design with a Proven Success
- Focus on Safety, the Environment & Sustainability
- Safe wind power to support daily use
- Hybrid Wind and Solar power generation platform
- Functional power supply and systems tower
- Payback between 4 - 8 years in good wind
- Multi-unit clusters for increased power
- Ultra-quiet operation at noise levels ≤40 dB
- Proven Scalability .3kW – 20kW unit sizes
- Operates effectively between -20ºC to 60ºC+
- Low wind power generation starting at 3m/s (6.7mph)
- No Cut Out Speed - Operates beyond 40m/s (89.5mph)
- Fully tested in arctic conditions with no issues
- Fully tested and operational under water
- Safe wind captures the most power in urban setting
- Small footprint allows effective land-use for efficient power
- Very efficient off-grid power for agriculture & remote use
- High Quality Supply Chain manufacturing in Japan
- Qualifies for Federal & State Tax Credits

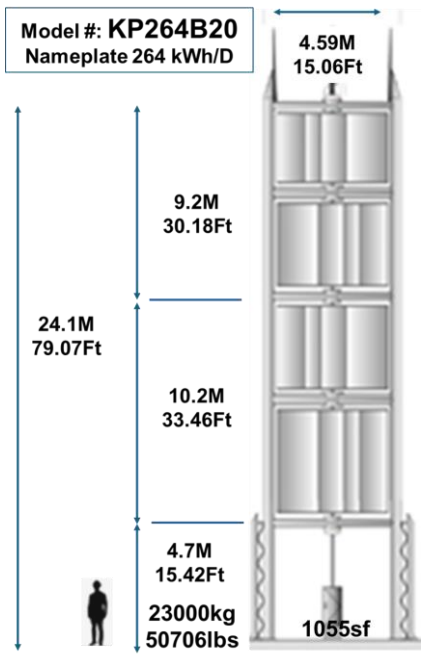
Model Specifications, Performance & Use Case

General Specifications

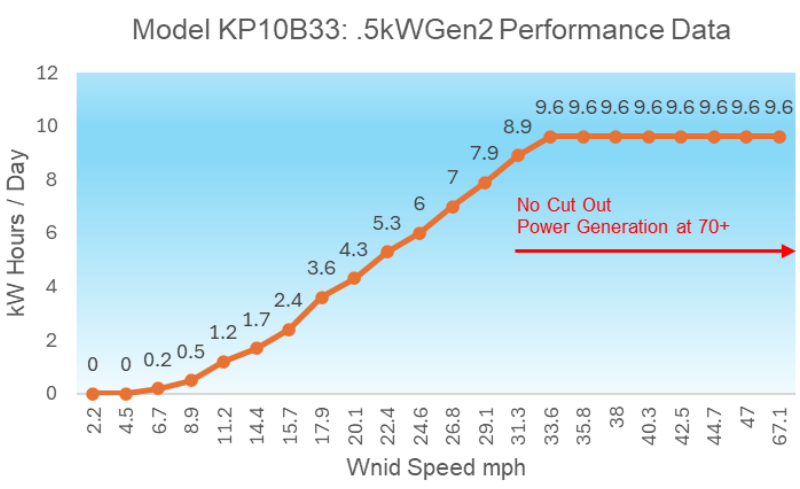
- Steel Structure
- Aluminum Blade Design
- 100% Recyclable Equipment
- Generation starts at: 7mph
- Cut-off wind speed: 134+mph
- Vibration: Minimal
- Noise: < 40dB
- Parts Warranty: 5 years
- Life Span: 25+ years
- Available Blade/Steel Wrap for branding or blending
- Available BESS: 50kW - 2MW

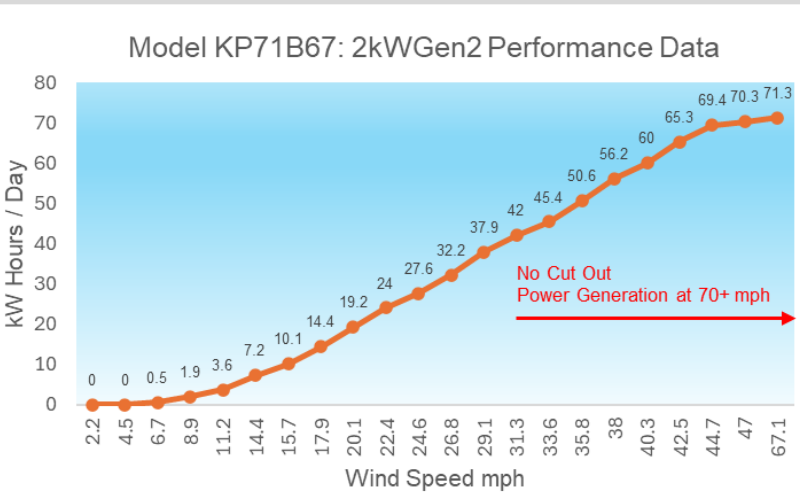


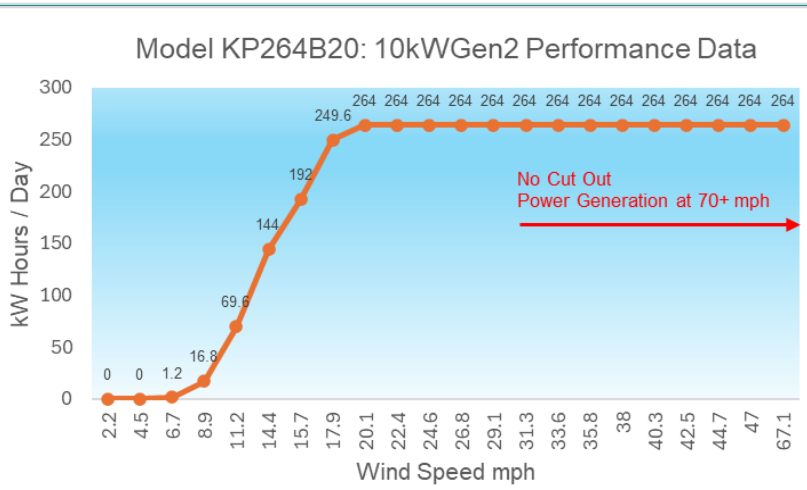




VCCT Performance



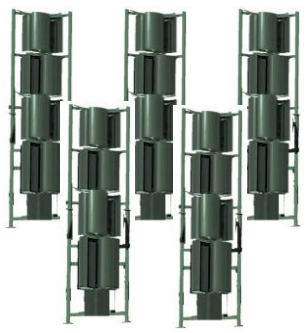




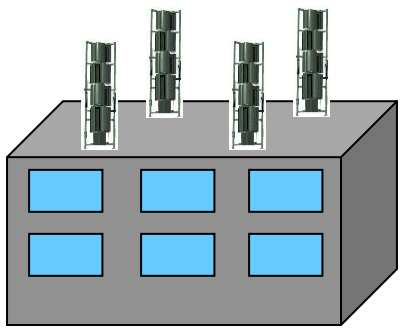
*Power production may vary due to wind conditions and other environmental factors not in the control of Kaze Power, Inc.

Use-Case Scenarios

Cluster Formation
Power Production

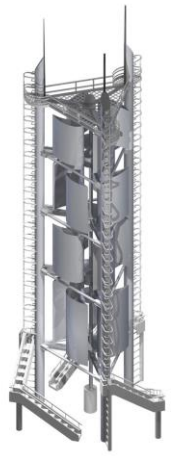


Roof Top Installation



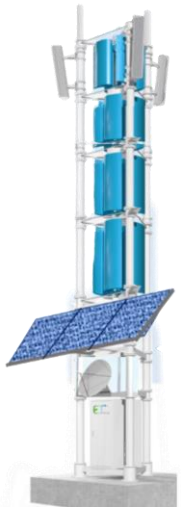
Parks,Trails, Streetlights

Emergency Tower



Agriculture & Farm Lots

Network Tower



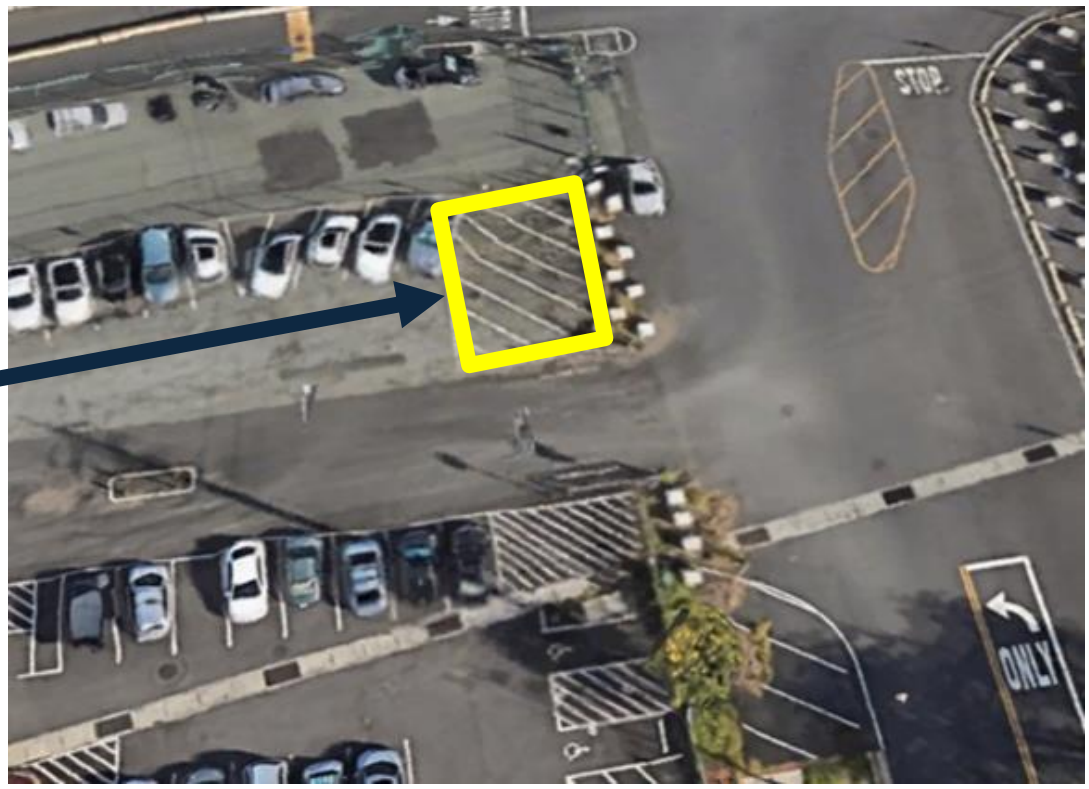
Charging Station

Hydro Power

Kaka’ako Location

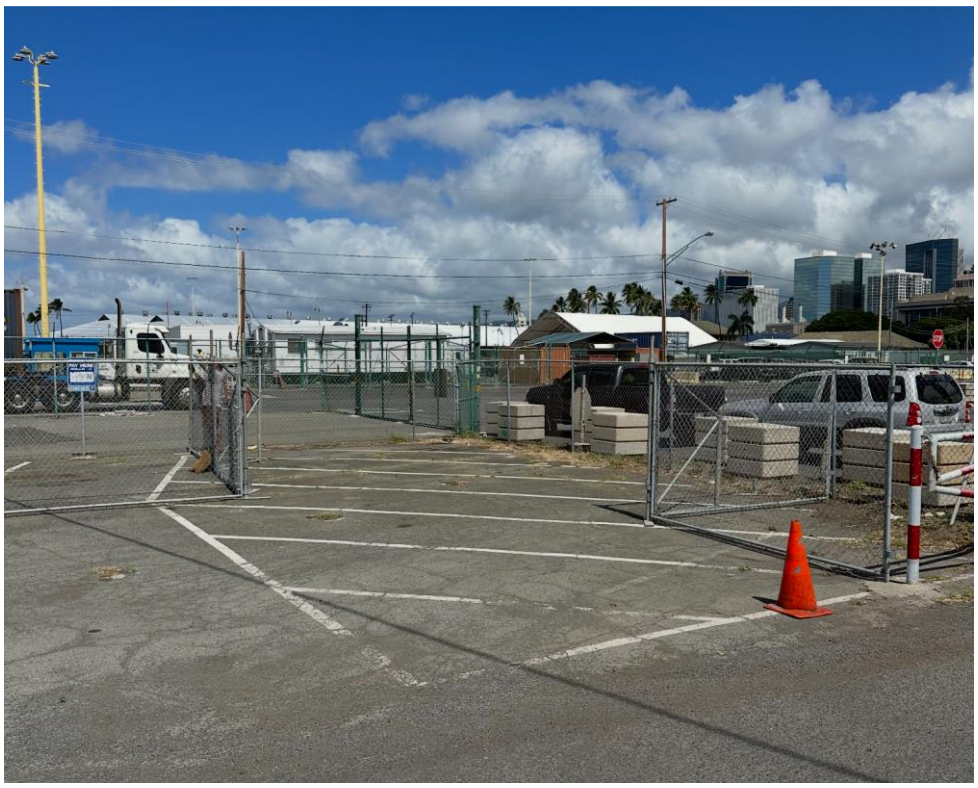
Entrepreneurs Sandbox Parking Lot C at 671 Llalo Street.

VCCT Wind Turbine Location



The VCCT unit location will be immediately on the right-hand side as you enter Parking Lot C. See yellow highlighted section. This is the Mauka Ewa corner of Parking Lot C.

Kaka’ako Installation: Staging & Delivery



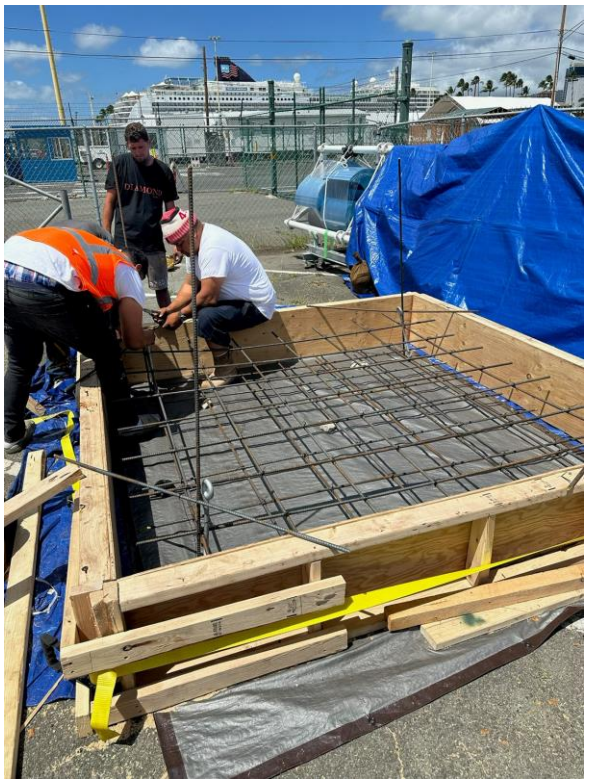
Site was cleaned and a security fence installed.

VCCT Unit delivered to site, checked and prepped for installation.

Kaka’ako Installation: Pad & Preparation

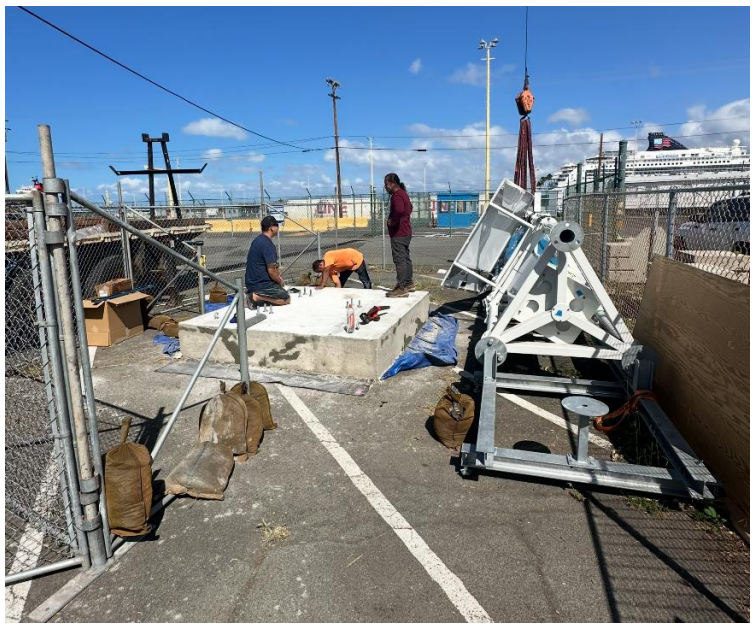
VCCT Foundation Pad

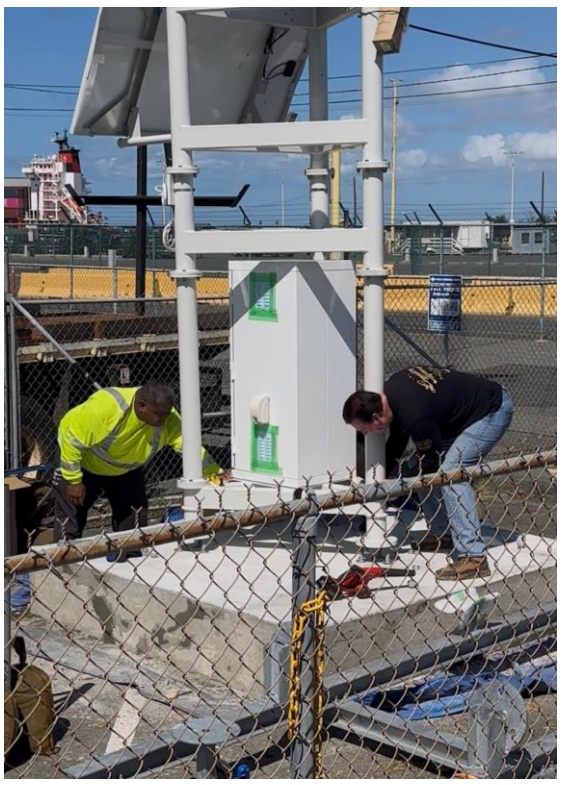
86” x 86” x 16” Concrete pad with 2 rows of #4 reinforced rebar in a 12” pattern. Mounting bolts and eye screws imbedded into concrete. 2 layers of heavy plastic placed in between asphalt and concrete pad.



Kaka’ako Installation: Lift & Installation

VCCT Unit prepped for installation and equipped with Wi-Fi Network, vibration sensor and wind sensor. Crane lifted the Unit into place over the imbedded bolts and nuts secured the Unit to the concrete pad.





Kaka’ako Installation: Final Installation

Kaka’ako Project: Testing Phase

In the initial 72 hours of operation, we began to track and monitor data collection and monitor equipment stability and safety.

Production data on the unit is collected and uploaded to the Japan team for review and evaluation.

After 30 days of data collection our team from Japan visited with us to inspect the turbine and assist in tuning the control management system.

Since their initial review we have since increased the resistance on the equipment to better support power delivery capacity from the Unit.

Average wind speeds in Kaka’ako are around 6 - 12 mph with evenings experiencing heavier gusts. During Kona winds we did see gusts upwards of 25 mph, but daily average wind speeds in the area are nominal.

Currently the unit is producing power to support the video security system and a Wi-Fi station broadcasting a test network signal from the top of the tower.

The security fencing, posted signage and video monitoring have proven to keep out any curious or nefarious activity.

Kaka’ako Project: Environmental Overview

Once the system began operation, we implemented a questionnaire form to support daily observations to track site impact and environmental interaction.

This observation form helps us identify things such as; bird, bat and insect strikes. Any visible evidence of a strike would likely be found around the turbine. In our case there has been zero evidence of insects, birds or bats having any interaction with the device in more than 200 visits since April's installation.

Continued video monitoring of the environment and observation of the turbines interaction with the surrounding area will continue throughout the demonstration life at the site.

Additionally, the turbine installation has not presented any issues in its location or foundation which would indicate settling or any additional adverse impact to the parking lot.

Overall, observations have concluded that since the installation there has been very little wildlife activity on or around the unit.

Kaka’ako Project: Data Collection

As a demonstration and research project, we are monitoring various performance and environmental impact elements. The following summary chart is provided after 36 weeks of observations and performance data monitoring.

Kaze Power & HCDA VCCT Collaboration Demonstration Project
Kaka'ako Location Data Collection Summary

Data Collection Period: April - December 2025 (36 weeks)

Environmental Assesment	Method	Summary
Wildlife Study	Visual monitoring 2-4 hr Cycles	No Wildlife strikes, limited activity
Wildlife Study	Weekly site visit visual inspection	No evidence of wildlife strikes
Ground Impact	Weekly site visit visual inspection	No evidence of any ground impact
Area Impact	Weekly site visit visual inspection	No evidence of environmental disruption
Noise Impact	Noise Decibel Reader	Unit operation noise at or below surrounding ambient noise
Safety	Weekly site visit visual inspection	Safe operation and no impact to surrounding life activities
Performance	**Method**	**Summary**
Wind Speed	Internal wind sensor	Average day is 3.7m or 8mph
Power production - Watts	Internal Control monitoring	92,618 Watt hours
Power production - kWh	Internal Control monitoring	92 kWh
Unit Stability	Vibration Sensor Readings	Vibration nominal
Network Systems	Wi-Fi signal connection	Stable and good broadcast strength

Through general observations and performance data review, the VCCT Unit is performing as expected. There have been no environmental impact issues and performance data is meeting expectations. The unit operates at a noise level less than the ambient noise in the environment. Daily life in the area continues uninterrupted evidenced by ongoing pedestrian foot traffic, vehicle parking adjacent and around the Unit perimeter fence and general parking lot use.

Kaka’ako Project: General Observations & On-Going Work

General Observations to Date:

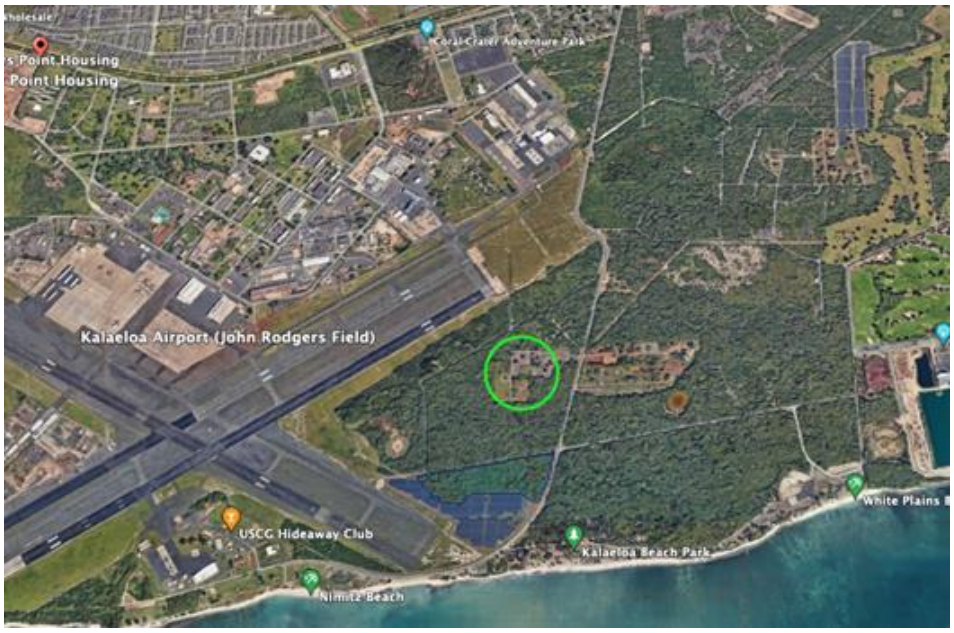
- No visible impact to the environment
- No evidence of any bird/bat strikes
- Unit production power as expected
- Unit operation noise at or below ambient noise in the surrounding environment
- Unit stable without any impactful vibration
- Stable WiFi signal
- Safe operation and no impact to surrounding life activities

As the system meets its one-year mark there will be additional services and testing to continue to monitor and improve the systems performance. The continued improvement of the system will include but not be limited to some of the following activity:

- Programed Display Board
- Publicly Available Wifi
- Publicly Accessible Weather Station
- Improved Wildlife Cameras
- Additional Battery Testing
- Additional Component Testing

As we improve our understanding of the system operation with the Kaka’ako project, we will continuously adjust the system to best fit our environmental and situational needs in Hawaii with ongoing monitoring.

Kalaeloa Location



Kalaeloa Heritage Park at 91-1940 Coral Sea Road, Kapolei, HI

VCCT Wind Turbine Location

The VCCT unit location is on an existing concrete slab located within a fenced-in area on the west-end of the park.

Kalaeloa Installation: Delivery & Staging

Disassembled Unit packed in 5 crates was delivered to the site.

Unpacking of each crate, checking components and prepping for installation.

Kalaeloa Installation: Assembly & Installation

VCCT base section was installed to concrete pad by setting section in place, drilling holes aligning with each hole of each leg, setting lag bolts into each hole using anchor adhesive and firmly tightening nuts to lock Unit into place. Using a boom lift, each section was installed, battery packs installed and control system tested for operation.

Kalaeloa Installation: Final Installation

Assembled VCCT Unit installed on concrete pad with 48V battery storage capacity to provide power for lighting and equipment charging.

Technology Application: Hybrid Systems

Thanks to the support of the HCDA, Kaze Power has been able to explore multiple conversations with community stakeholders in exploring future use case scenarios where Kaze Power's vertical turbines can be a cornerstone technology to support adaptive power needs of the property owners.

Our focus in developing community solutions has been on commercial applications, although we have had significant interest from residential owners on all islands. It's clear the pathway to support safe wind technology like our VCCT in a residential setting will be different than the pathway for Horizontal Wind Turbines. The future support for legislative rules to allow for safe-wind technology may be necessary to see VCCT used in a wide scale residential application.

The development of hybrid power systems utilizing both wind and solar power as a platform, has been a key driver for many of our discussions. Rural or neighbor island customers have driven the conversation around micro-grid development and power packages designed to support agricultural activity.

In the ongoing development of a robust renewable energy system design, Kaze Power has taken up additional technology to support the design and implementation of this new type of renewable power system.

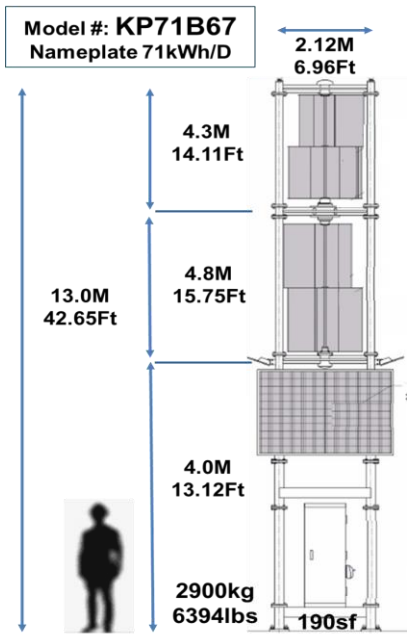
Hybrid System Design Components

Wind Power

Kaze Power VCCT Hybrid System

VCCT Wind Turbines:

Sample Model KP71B67: rated 71 kWh

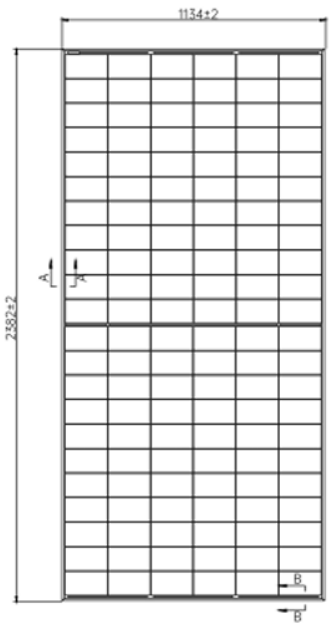


Solar Power

Solar Panels

Aiko Stellar or Similar 1N+66 Panel:

680W @ 71.65 lbs /ea. (45” x 94” x 1”)



BESS

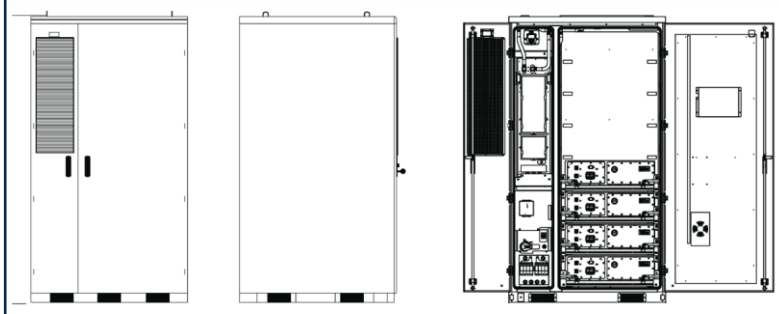
Battery Management System

Star Energy:

AES 210HV: 200 kWh @ 5,490lbs/ea. (51.2” x 51.2” x 93.4”)

1x 60k-3P-480v PCS (Pedestal or Cabinet Mount)

200 kWh Battery Storage & Power Control System



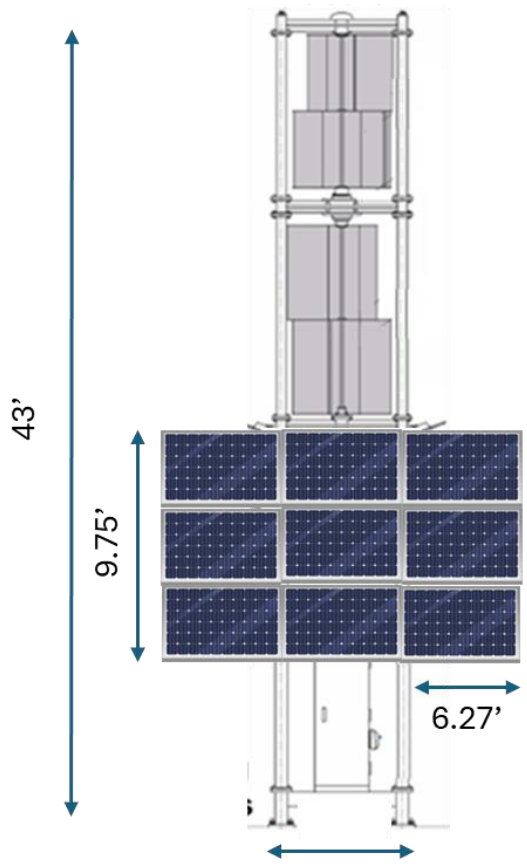
Portable Power Bank

Komodo Mobile Power Unit

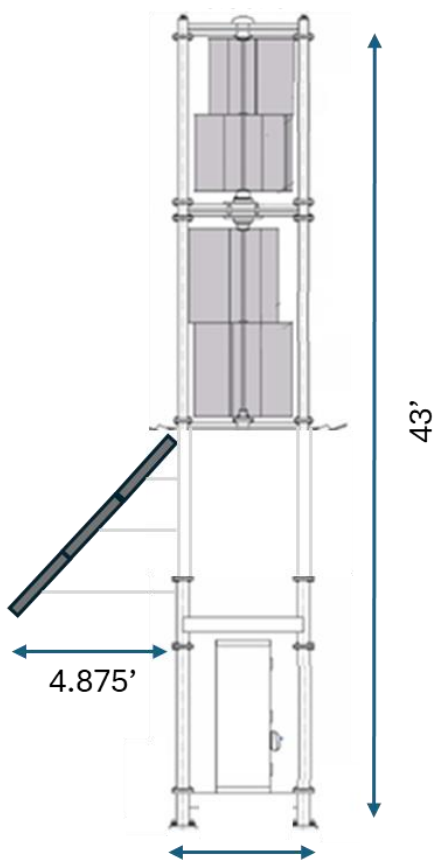
Weight: 2800 lbs.
Max DC Charge: 2*80 AMP (2*7kW)
kWh Capacity: 100 kWh
AMP Hours: 1302 Ah @ 72v
Operating DC Volt: 67.2V - 87.6V

Example System Configuration

Front View

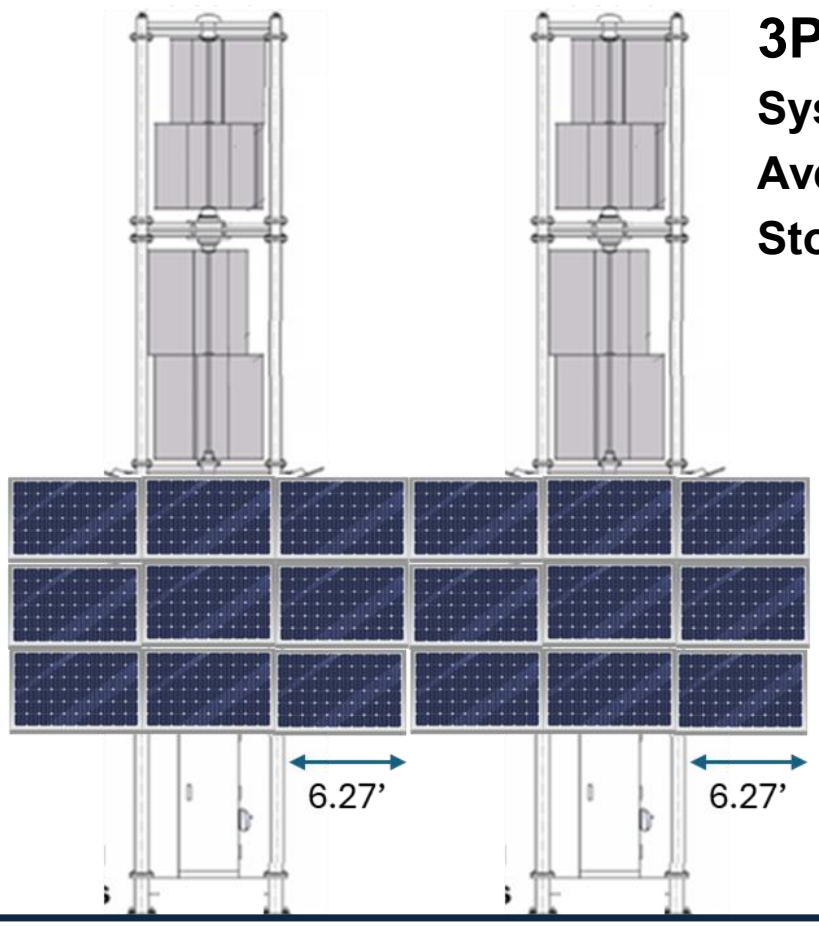


Side View



Wind Speed		KP71B67	
m/s	mph	kW	kWh-24hrs
1	2.2	0	0
2	4.5	0	0
3	6.7	0.02	0.5
4	8.9	0.08	1.9
5	11.2	0.15	3.6
6	14.4	0.3	7.2
7	15.7	0.42	10.1
8	17.9	0.6	14.4
9	20.1	0.8	19.2
10	22.4	1	24
11	24.6	1.15	27.6
12	26.8	1.34	32.2
13	29.1	1.58	37.9
14	31.3	1.75	42
15	33.6	1.89	45.4
16	35.8	2.11	50.6
17	38	2.34	56.2
18	40.3	2.5	60
19	42.5	2.72	65.3
20	44.7	2.89	69.4
21	47	2.93	70.3
30	67.1	2.97	71.3

71 kWh VCCT Hybrid System					
# Units	1	# SP/Unit	9	TTL SP	9
SF/Unit	230	TTL SF	230		
Power Production Solar					
Solar kWh/Day/Unit	2	TTL Solar	18		
Power Production Wind					
Wind Speed	10	15	20	25	30
Unit kWh/Day	3	10	19	28	40
TTL kWh/Day	3	10	19	28	40
Power Production Hybrid System					
TTL kWh/Day	21	28	37	46	58

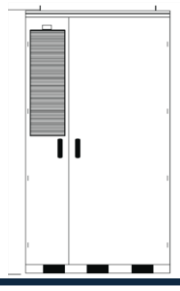


3Ph - Multi-Unit Configuration

System Rating: Rated for 178 kWh /Day

Average Output: 110 kWh /Day

Storage: 200 kWh 3 Phase +
200 kWh 1 Phase Portable



Thank you for your support of Kaze Power!

Questions and Assistance, please contact:

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