DISCOVER ENERGY SYSTEMS

CASE STUDY

Air Quality Test Station (California)

Berger Solar Electric

DISCOVER PRODUCTS

- 24 x 48-48-5120-H AES RACKMOUNT Battery Modules
- 4 x AES RACKMOUNT Battery Module Combiners (950-0049)
- 28 x AES RACKMOUNT Quick Stack Racks (950-0050)
- 1 x LYNK II Gateway (950-0025)

OTHER PRODUCTS

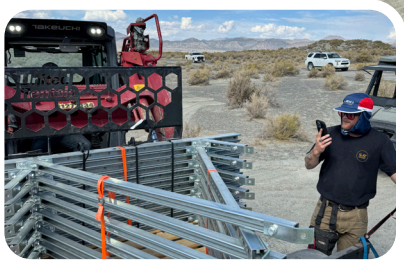
- Sol-Ark 15K-2P-N Hybrid Inverter
- 24 x Maxeon 425 W Solar Panels

APPLICATION

Power electronic sensors and measuring equipment in a remote location

REQUIREMENT

Replace 17 year old PV array and energy storage



SOLAR AND BATTERY RETROFIT MONO LAKE, CALIFORNIA

BERGER SOLAR • ELECTRIC

AES RACKMOUNT 48-48-5120-H

In 2024, in a picturesque yet remote location on the shores of Mono Lake, California, Berger Solar Electric completed a critical solar and battery retrofit to support air quality monitoring for the Great Basin Unified Air Pollution Control District. This project aimed to ensure the continued functionality of a vital monitoring site that has been operational for approximately 17 years.

The original solar panels and batteries at the site had reached the end of their life cycle, prompting Berger Solar Electric to replace key components while preserving the existing infrastructure. The retrofit required adapting the original base frame, crafting a custom rack for the new solar modules, and utilizing the existing Cool Cell battery cabinets. These cabinets now house 24 of Discover Energy System's heated AES RACKMOUNT 48-48-5120-H batteries, each with a capacity of 5.12 kWh.

13711 International Pl Unit 320, Richmond, BC, V6V 2Z8, Canada
+ 1.604.242.0350
info@discoverenergysys.com
discoverenergysys.com

DISCOVER ENERGY SYSTEMS

CASE STUDY

Air Quality Test Station (California)

Berger Solar Electric

Berger Solar Electric's commitment to using top-quality products led to installing 24 Maxeon 425 W solar modules, a Sol-Ark 15K-2P-N inverter, and Discover Lithium batteries, creating a reliable and efficient energy generation and management system. The upgraded system is designed to provide several days of autonomy, ensuring uninterrupted data collection even during extended stormy weather—an essential aspect of the district's air quality monitoring mission.

CHALLENGES AND SOLUTIONS

Given the site's remote location, logistical challenges were inevitable. Accessing the installation site required:

- A 30-minute drive on a dirt road from the nearest paved access point to a parking area.
- Transporting materials and equipment, the final 1,000 yards across dunes using specialized vehicles, including a UTV and a tracked skid steer.

Removing the old batteries and delivering the new ones required meticulous planning and coordination, as limited accessibility necessitated that all operations had to be efficient and precise to minimize disruptions and ensure the team's safety.

13711 International Pl Unit 320,
Richmond, BC, V6V 2Z8, Canada
+ 1.604.242.0350
info@discoverenergysys.com
discoverenergysys.com

DISCOVER ENERGY SYSTEMS

CASE STUDY

Air Quality Test Station (California)

Berger Solar Electric

RETROFIT HIGHLIGHTS

- **Solar Panel Upgrades**: A custom rack was constructed to mount the new solar modules using the existing base frame. This approach minimized the need for additional groundwork, ultimately saving time and resources.
- **Battery System Enhancement**: The AES RACKMOUNT heated batteries installed with Quick Stack Racks in the Cool Cell cabinets provide robust energy storage. With 24 units totaling 122.88 kWh of capacity, the system can sustain power even during extended periods of bad weather.
- **Remote Accessibility**: The project's location required innovative logistics to ensure that all equipment and materials reached the site efficiently over the challenging terrain.
- **Top-Quality Components**: By utilizing Maxeon 425 W solar modules, a Sol-Ark 15 kW inverter, and Discover's AES RACKMOUNT 5.12 kWh heated batteries, the system assures exceptional performance and durability to meet the highest standards of reliability.

CONCLUSION

This retrofit project at Mono Lake showcases Berger Solar Electric's commitment to innovation and adaptability. By revitalizing the solar and battery systems at the air quality monitoring site, it will remain functional for years to come. Despite the challenges of remote access and the complexity of integrating new technology with existing infrastructure, the project was a resounding success.

Berger Solar Electric takes pride in contributing to the vital work of the Great Basin Unified Air Pollution Control District in monitoring and protecting the unique environment of the Mono Lake region.

13711 International Pl Unit 320,
Richmond, BC, V6V 2Z8, Canada

+ 1.604.242.0350

info@discoverenergysys.com

discoverenergysys.com