

PROBLEM + SOLUTION

Tasked with implementing a Combat Training System for the Nevada Test and Training Range at Nellis AFB, Cubic turned to Northern Reliability. The result was a robust, off-grid power solution that could provide continuous power for their equipment at remote sites with no existing utility connection. Because of the extreme location, every energy storage system was designed with reliability and longevity in mind. To accomplish this in the harsh climate of the southern mountains in Nevada, Northern Reliability provided heavily insulated, heated and actively ventilated battery cabinets. These design elements environmentally protected the batteries from extreme temperatures while maintaining a healthy life-span and capacity. In addition, Northern Reliability designed a custom mounting frame with adjustable legs and articulating feet so that the systems could easily be deployed on uneven, rocky ground.

OVERVIEW

APPLICATION: *Mission-Critical Autonomous Power Generation*

SYSTEM TYPE: *Off-Grid, Solar-Powered Energy Storage Systems*

NUMBER OF SYSTEMS: 7

BATTERY SIZE: *1,200 Ahr*

LOCATION: *Remote Mountain Top - Nellis Air Force NV, USA*

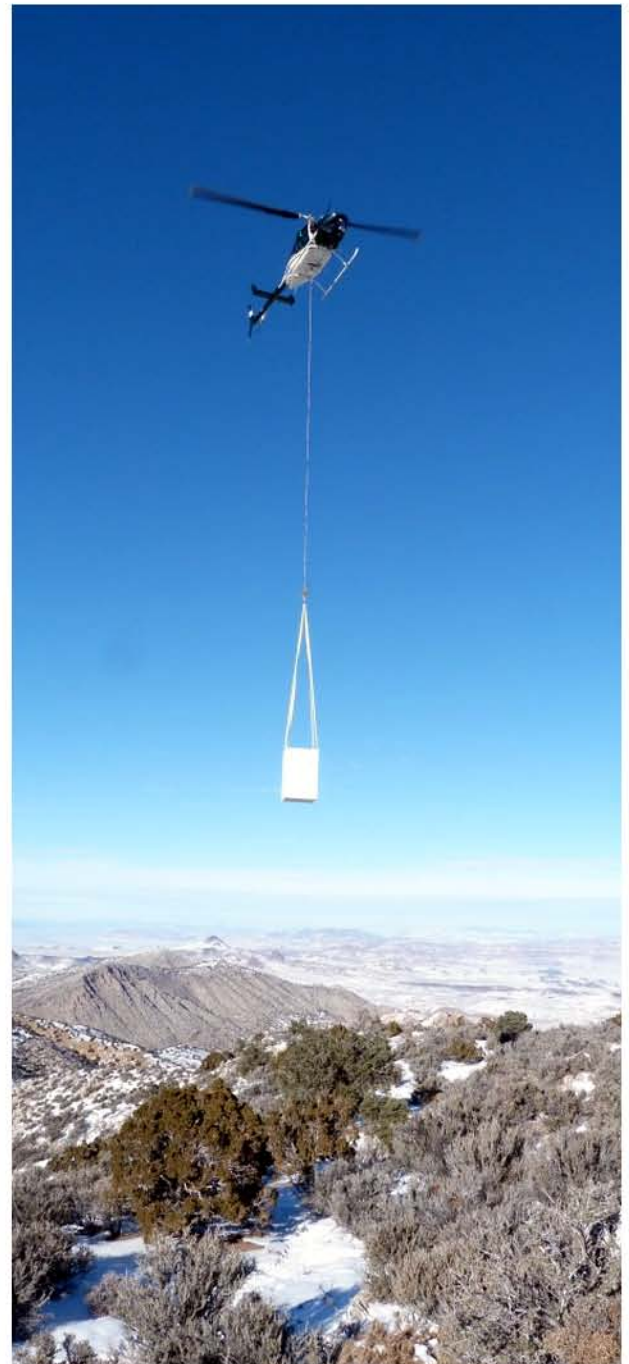
YEAR: 2013

BATTERY TYPE: *Absorbent Glass Mat (AGM) - Valve Regulated Lead Acid (VRLA)*

CONTROLLER: *SC-100*

ENCLOSURE: *Custom, NEMA 3R, Environmentally Controlled Cabinet*

SYSTEM DIMENSIONS: *72"H X 48"W X 36"D*



FEATURES + BENEFITS

2.3 kW PV array configured in 2 redundant arrays

1,200 Ahr AGM VRLA industrial grade battery

Power conversion/conditioning and distribution system

Environmentally conditioned battery cabinet

PV frame with adjustable legs and articulating feet for easy deployment

Customized system controller with remote monitoring functionality

RELIABILITY: *Generator provides back-up power during poor-solar events.*

AGILE GENERATION: *Hybrid architecture minimizes solar array size and fuel consumption.*

DURABILITY: *Robust design can withstand extreme temperatures.*



“NRI’s solution was a stand-alone solar power system employing a 2.3kW photovoltaic array and back-up generator to charge the battery bank and power the customer loads.”