
Discover®
Innovative Battery Solutions
discoverbattery.com

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About Discover

Battery Manufacturer Established 1949

$200M Global Revenue 2018

Portfolio

- Traction Dry Cell
- Tubular Opz
- Sealed VRLA
- Automotive SLI
- AES $LiFePO_4$

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Off-Grid – Remote Water Pump Station

Discover AES $LiFePO_4$ 42-48-6650

Water is a vital resource for any community. In the aftermath of hurricane Maria, many remote water systems in Puerto Rico failed because of a lack of power. Many are now being reconfigured with the assistance of the American Red Cross and Water Mission. Pump and filtration systems are being backed up with off-grid solar systems so as to be able to ride out future severe weather and consequential power interruptions. Critical to the design is a highly efficient solar system supported by a single AES battery utilizing LYNK closed-loop network communication to optimize dynamic charging capability of the Schneider SW Inverter Charger and MPPT 60 charge controller. Plug-and-play LYNK network communication and a straight forward battery cable installation, the same as a lead acid battery, make the AES $LiFePO_4$ battery the preferred choice for installers in remote locations.

System

- 1x AES 42-28-6650
- 1x Schneider SW Inverter Charger, SW PDP, SCP
- 1x Schneider MPPT 60

Project

- Location: Puerto Rico,
- Client: American Red Cross, NGO Water Mission

water mission

American Red Cross

Application

- Micro grid power for community water pump and filtration station

Requirement

- Backup power, high efficiency charging, solar / electrical system

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Self-Consumption – Whole Home Backup

Discover AES LiFePO4 12-48-6650

After investing in a sophisticated grid interactive inverter charger system to support advanced self-consumption the home owner became frustrated with the installed lithium batteries that did not report state of charge (SoC) or available capacity to the system. Son Solar Systems came to the rescue by installing five Discover AES LiFePO Batteries with LYNK technology. AES LYNK technology now provides real time closed-loop communication with the Xanbus enabled Schneider Conext XW+ inverter chargers. Not only can the home owner now easily monitor SoC, available store energy and daily energy throughput, but AES LYNK is also improving system performance with faster recharge times.

System

- 5x AES 12-48-6650 (33 kWh)
- 2x Schneider XW+ Inverter Charger, XW+ PDP, SCP
- 2x Schneider MPPT 80

Project

- Location: St. Louis, KS - USA
- Client: Home Owner
- Installer: Son Solar Systems

Application

- Grid-tie whole home backup and self-consumption

Requirement

- Upgrade from old lithium to advanced LiFePO able to communicate status

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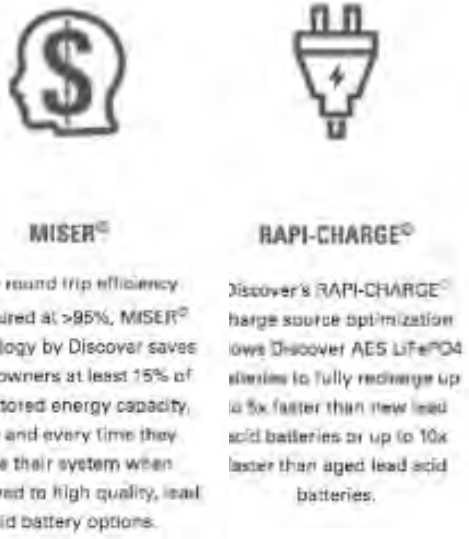
Off-Grid – Remote Home

Discover AES LiFePO4 12-48-6650

In May 2017, the Auerbachs decided to upgrade their thirteen year old Lead Acid batteries to lithium batteries seeking better charging and discharging efficiency. Their batteries were replaced with Discover AES LiFePO batteries with over 95% two-way efficiency. It didn't take them long to notice the increase in efficiency. "We ran the generator for a total of 90 hours, a shade under one hour per day." In past years, the system would require the generator to run for 4 - 6 hours every second or third day."



System

- 3x AES 42-48-6650 (19.95 kWh)
- SMA Sunny Island 6048, Sunny Boy 2000
- Morningstar 60-600 MPPT, 60-150 MPPT
- Schneider ComBox, SCP, AGS
- 8 kW Generator

Project

- Location: Lasqueti Island, BC Canada
- Client: Ezra and Melinda Auerbach
- Installer: Discover Battery

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Application

- Off-grid home

Requirement

- Improve system efficiency, upgrade from old Lead Acid battery 750 Ah (36 kWh)

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Off-Grid – Remote Business and Workshop

Discover AES LiFePO4 42-48-6650

Jason Andrade is a professional off-grid solar installer that demands top performance and prefers to use the right tool for the job. Jason has installed many lead acid battery banks and had concerns that the Peak Power delivered by lithium batteries might not be able to handle the peak surge power required by off-grid inverters starting demanding shop loads. However, as a professional Jason was eager to put AES RUSH technology to the test.

See and hear his 'Lead to Lithium' story in a YouTube video and learn why Jason loved how easily the batteries installed and how he now uses his Discover AES LiFePO batteries with confidence everyday.

RUSH©

Discover's RUSH© technology enables Discover AES LiFePO4 batteries to handle the high charge and discharge current requirements common to industrial, telecom/UPS and solar applications.

System

- 3x AES 42-48-6650 (19.95 kWh)
- 2x Xantrex XW Inverter Charger, XW PDP, SCP, AGS, ComBox
- 2x Xantrex MPPT 60

Project

- Location: Redding, California USA
- Client: Jason Andrade
- Installer: West Coast Sustainables

Application

- Off-grid – Workshop: pumps, vacuum system, compressor, welding torch

Requirement

- Upgrade from (28.8 kWh) lead acid to LiFePO support heavy load starts

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Micro-Grid – Remote Lodge

Discover AES LiFePO4 12-48-6650

During the summer peak season a remote luxury fishing lodge runs 600 kVA of diesel generators to power lodge buildings and luxury yachts moored at their dock. However out of season, with only the caretakers present, the daily running of the diesel system was prohibitively expensive. To reduced out of season diesel consumption, Hakai Energy Solutions reconfigured their system, adding a containerize three-phase inverter charger system supported by eighteen AES batteries in parallel. Taking advantage of AES MISER and AES PARALLEL POWER technology a 50 kVA generator now easily supports recharging once every 4-5 days.

System

- 18x AES 12-48-6650 (120 kWh)
- 3x SMA Sunny Island Inverter Charger

Project

- Location: Dent Island, BC Canada
- Client: Dent Island Lodge
- Installer: Hakai Energy Solutions

HAKAI EnergySolutions

Application

- Remote Micro-grid – luxury fishing lodge

Requirement

- Reduce diesel consumption, support caretakers in residence out of season.

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Off-Grid – Remote Medical Clinic

Discover AES LiFePO4 42-48-6650

Getting medical clinics set up in remote locations and deploying to disaster zones is a logistical nightmare and once on site services are usually lacking critical equipment and restricted by poor work conditions. CLINC IN A CAN has responded with a turn-key containerize medical clinic that, once on site, can be functional in minutes. Critical to the design is a highly efficient solar system supported by a single AES battery utilizing LYNK closed-loop configuration with a Schneider SW Inverter Charger and MPPT 60 charge controller to optimize system performance.

System

- 1x AES 44-24-2800
- 1x Schneider SW Inverter Charger, SW PDP, SCP
- 1x Schneider MPPT 60

Project

- Location: Various Global Deployments
- Client: NGOs and Disaster Response
- Installer: CLINIC IN A CAN

Application

- Backup power for hospital

Requirement

- Highly efficiency solar / electrical system