

case study

ELEMENTARY SCHOOL

Acumen EMS™ Deployed at San Diego Elementary School to Minimize Demand Charges and Deliver Savings

THE CHALLENGE

Cal Solar Inc., a solar energy contractor based in California, was searching for a solution for an elementary school in San Diego that would enhance energy efficiency and reduce electricity bills. Despite having a Delta 55kW/110kWh energy storage system (ESS) and a robust 248.40 kW solar PV array, the school faced significant challenges in managing energy consumption and costs. They struggled with high peak demand charges and inefficient energy-use patterns, frequently dispatching energy from the battery at inopportune times resulting in missed opportunities for savings. The school needed an energy management controls software that would effectively optimize their ESS to reduce their demand during hours when electricity prices were greatest.

THE SOLUTION

To tackle these challenges, Cal Solar Inc. partnered with Energy Toolbase to integrate the ESS with Acumen EMS™ controls software, aiming to maximize energy savings through time-of-use (TOU) demand charge management. This management strategy utilizes peak shaving by dispatching the ESS when the school's metered demand reaches a calculated threshold based on the site's load and the demand charge prices for each TOU period. Because the school's rate schedule had on-peak demand charges of \$48 in summer and \$28 in winter, this strategy greatly improved savings. Also, Energy Toolbase's asset monitoring software, ETB Monitor, provided real-time performance insights to ensure efficient operation of the ESS and to facilitate necessary adjustments to optimize system performance.

PROJECT SUMMARY



LOCATION

San Diego, California



DEPLOYMENT DATE

April 2024



ESS PROVIDER

Delta



SYSTEM SIZE

55kW/110kWh



FACILITY TYPE

Elementary School



EMS APPLICATIONS

Time-of-Use Demand Charge Management



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