

GROSSMONT UNION HIGH SCHOOL DISTRICT AMBITIOUS ENERGY PROJECT IN SOUTHERN CALIFORNIA OFFERS MANY OPPORTUNITIES TO LEARN

Location: La Mesa, California

Size of Project: Nearly 22,200 students; 918 employees

Customer Challenge

Reduce soaring energy demand charges, accounting for up to 60 percent of utility bills

ENGIE Storage Solutions

4.7 MWh of energy storage, distributed over 14 sites

Why ENGIE Storage

- Responded to bid with turnkey solution that required no upfront capital outlay

Benefits

- \$5 million in projected savings from demand-charge avoidance
- More funds available to meet educational objectives
- Minimal staff time required for deployment
- State's largest K-12 storage project highlights district's leadership in sustainability efforts



Electricity is vital, but high cost strains schools

For the past two and a half years, Lindsey Danner has been pulling out all the stops to keep electricity flowing to the 11 schools that serve more than 22,000 students, faculty, and staff in the Grossmont Union High School District in San Diego County. “We’ve seen a substantial increase in demand rates,” says Danner, who serves as the district’s energy manager. “We have no choice but to pay our utility bills, so the rate hike really cuts into meeting our educational objectives.”

With funds from Prop 39, Danner has replaced indoor and outdoor lighting with energy-efficient LEDs; is working on installing solar PV arrays on several campuses to reduce the amount of power drawn from the grid; is looking to add automated HVAC thermostats; and has worked with San Diego Gas and Electric (SDG&E) to move the district to a lower-cost time-of-use tariff. Most importantly, she launched an intensive effort to educate students and staff on energy-saving habits.

But she didn’t stop there, because reducing overall energy use wasn’t putting much of a dent in the district’s demand charges, the additional fees incurred to account for the district’s highest-demand period in each billing cycle. When the air conditioning kicks in across the district on a hot day, when the teachers stow and charge all 22,000 student Chromebooks after school, or when the sports lighting turns on for nighttime games, the district’s power draw spikes. And those demand charges surge, amounting to as much as 60 percent of Grossmont’s utility bill.

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– Lindsey Danner, Aquatics and Energy Manager, Grossmont Union High School District

MANAGED SOLUTION: CUSTOM-DESIGNED TO SAVE

Realizing that energy storage could mitigate the district's demand-charge problem, Danner issued a request for proposals from several major energy storage providers. Only one provider—ENGIE Storage (formerly known as Green Charge)—responded with a turnkey solution that met all of her requirements.

Taking into account current and predicted energy use profiles at each school, as well as existing capacity generation and environmental data, ENGIE Storage designed and began deploying its 30 kW/60 kWh and 250 kW/500 kWh GridSynergy® battery storage systems throughout the district. Controlled by GridSynergy software through a secured cloud, the storage systems sense surges in demand at each school. Then customized algorithms direct the battery storage systems to discharge enough power to prevent a spike in the amount of energy the district is drawing from the grid. The batteries recharge during off-peak hours, minimizing the cost of covering the demand peaks.

MILLIONS OF DOLLARS RETURN TO EDUCATION

When the project is complete, Grossmont will have a total of 4.7 megawatt-hours of energy storage deployed at 14 sites, making it the largest K-12 energy storage installation in California. Yet Danner had no trouble getting a project of this scope approved, because it required no capital outlay for the district, nor did it involve extensive paperwork to secure funding from other sources.

The energy storage was financed using a shared-savings model, in which ENGIE Storage retains ownership of the equipment and handles all installation, utility interconnection, and maintenance. Grossmont and ENGIE Storage share the accrued energy savings, which Danner will be able to verify in real time using the GridSynergy portal on her desktop and mobile devices. Those savings are projected to reach \$5 million over the next ten years, and the district will gladly redirect its portion to key objectives, such as class size reduction and facility improvements.

Because she didn't have the hassle of a capital equipment purchase and installation, the project placed few demands on Danner, who, in addition to her energy management role, also oversees all of the district's aquatic facilities. "The project manager was very easy to work with," she says.



Out of the way and hassle-free, the GridSynergy storage system charges during off-peak hours and discharges automatically when it senses demand peaks.

"Aside from the initial site walks and providing access for SDG&E approvals and building inspections, I haven't had to do much. It's been a smooth, turnkey experience, and [ENGIE Storage] is always accessible to answer my questions."

OTHER DISTRICTS LOOKING TO GROSSMONT

Recently Danner shared her experience of the Grossmont energy storage project at a meeting of San Diego County's K-12 School Collaborative of Energy Managers. She says energy managers from other districts have shown great interest in the project, particularly in the way it integrates with solar PV plants and EV chargers. Danner is working with ENGIE Storage to understand how the battery storage system can best support solar energy generation so that Grossmont can obtain the dual benefits of minimal demand charges and solar incentives from SDG&E.

Grossmont has also joined a new demand response program that will benefit several districts in the area that use ENGIE Storage energy storage systems. Under this program, SDG&E will compensate ENGIE Storage when its aggregated customer-sited energy storage helps balance grid requirements, and ENGIE Storage will pass on these benefits to Grossmont and the other schools. "I'm excited to see this all coming together," Danner says.

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About ENGIE Storage

ENGIE Storage (formerly Green Charge) helps power the world more efficiently and sustainably. As the nation's number one distributed energy storage company, we serve energy producers, distributors, and consumers, including utilities, network operators, and energy consumers in business and government.

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