

San Dieguito Union High School District



“Our mission is to provide a world-class education for all students through quality programs that engage students and inspire achievement. The savings from this solar project with ENGIE Services U.S. helps us meet these critical goals.”

Ken Noah, Superintendent (2008-2013)

THE OPPORTUNITY

The San Dieguito Union High School District (SDUHSD), based in Encinitas, California, a community in North County, San Diego, serves more than 12,000 students between 7th and 12th grade. In 2007, SDUHSD began to consider ways to “green” the District through clean renewable power. In 2009, after considering multiple options through a competitive solicitation process, the District chose a solar power program with ENGIE Services U.S. (ENGIE) to help them achieve their vision. ENGIE worked with the District to understand its objectives and needs with respect to its overall facilities master plan. A local San Diego team of ENGIE energy experts collaborated with District leaders on program development, financing, design, and construction to realize their vision.

After multiple phases of energy work from 2009 to the present, SDUHSD is showing the community that creative ideas for solar projects can leverage available funding and set a good example for other institutions in the region to follow.

THE PARTNERSHIP

In 2010, two megawatts of solar photovoltaic (PV) power were installed on parking structures at Canyon Crest Academy and La Costa Canyon High School. ENGIE designed and built the entire carport system and continues to operate, maintain, measure, and

Program Highlights

- \$10.4MM in expected energy savings over 15 years
- ~50% of District electricity needs met by solar photovoltaics (PV)
- 2,200 metric tons of CO₂ emissions reduced annually, the equivalent to removing 471 cars from the road

Technical Scope

This program encompasses a total of 2.9 MW of solar PV installed at Canyon Crest Academy, Earl Warren Middle School, and La Costa Canyon High School. The full program scope, implemented across three construction phases, includes:

Phase I (2009-2011)

- 2 MW of solar PV on parking structures at Canyon Crest and La Costa



Technical Scope (continued)

Phase II (2016–2017)

- 163 kW roof-mounted solar system at Earl Warren
- 30 kW/60 kWh battery storage system at Earl Warren

Phase III (In Progress)

- 746 kW of additional solar PV on parking structures at Canyon Crest and La Costa
- Canopy LED lighting under the arrays

guarantee the system's performance. This initial phase of energy work outperformed expected savings by \$1.6 million, spurring additional phases of energy upgrades, including more solar at Canyon Crest and La Costa and a rooftop solar system of solar power and a 30 kW/60 kWh battery storage system at the new Earl Warren Middle School. The battery storage system allows the flexibility to offset peak electricity use during high-demand periods.

Throughout all phases of work, the District has made smart choices to reduce the budgetary impacts of funding the program, leveraging California Solar Initiative rebates and Distributed Generation Renewable energy rates to offset the project cost.

3 DIMENSIONS OF IMPACT

This partnership demonstrates SDUHSD's commitment to working through a complex process with the right partner to bring the benefits of solar power to its schools. ENGIE is committed to building three dimensions of impact in every customer's future:



Supporting People

- In 2011, SDUHSD and ENGIE hosted a ribbon cutting event to celebrate the completion of Phase I, while cultivating awareness and familiarizing the community with the benefits the solar program brings to the broader community. At the event, the overall program was lauded for exemplifying environmental stewardship through fiscal responsibility.
- While providing much-needed shade from the hot San Diego sun, the solar carports are also linked to educational kiosks on campus that showcase to students and staff live production trends and ongoing energy savings.



Saving Money

- The completion of the solar project is expected to save the District \$10.4 million in energy savings over the life of the project and is producing approximately 50 percent of the District's electricity needs.



Protecting the Environment

- The program reduced CO2 emissions by 2,200 metric tons annually, the equivalent to:
 - Removing 471 cars from the road
 - Powering 238 homes from a year
 - Sequestering carbon from 2,583 acres of U.S. forests



Energy storage system at Earl Warren Middle School