



Manhattan Beach Unified School District



THE OPPORTUNITY

Located in Los Angeles County, Manhattan Beach Unified School District (MBUSD) serves more than 7,000 students across eight K-12 schools. In its mission to prepare students to meet the challenges of a changing, complex and technology-rich global society, the District needed to find a way to reduce energy costs while maintaining a sound budget focused on maximizing student achievement.

THE PARTNERSHIP

MBUSD partnered with ENGIE Services U.S. (ENGIE) to design and implement a large-scale, paid-from-savings program to address deferred maintenance needs and improve the learning environment.

As part of the comprehensive program, ENGIE built a 515 kW solar parking shade structure and a 116 kW roof-mounted solar system at Mira Costa High School, replaced a combined 63 heating and cooling units at Mira Costa High School and Manhattan Beach Middle School, and installed interior and exterior state-of-the-art LED lighting at every school in the District. The Mira Costa High School pool received a new heating and pump system, and 11 carrier VVT dampers were replaced with new variable air volume (VAV) dampers at the District Administration Building. The program cuts District utility expenses in half and is expected to yield \$9.1 million in energy cost savings over its lifetime. In addition, all work was completed without the use of General Fund dollars.

Program Highlights

- Creates over \$9.1MM in savings
- Cuts District utility expenditures by 50%
- Upgrades existing infrastructure without using General Fund dollars
- Reduces CO₂ emissions equivalent to removing 366 cars from the road annually

Technical Scope

- Installed 515 kW solar parking shade structure and 116 kW roof-mounted solar system
- Installed interior and exterior state-of-the-art LED lighting throughout the District
- Thirty new 4-ton and nine new 5-ton cooling-only, split unit condensers
- 14 new split system heat pump units
- Solar hot water heating and pump speed control for Mira Costa High School pool

3 DIMENSIONS OF IMPACT

ENGIE is committed to building three dimensions of impact in every customer's future:



Supporting People



Saving Money



Protecting the Environment

As a result of the program, MBUSD achieves significant financial savings, ensuring that the District is able to fully support its mission to provide students with a top-notch education. New heating and cooling systems at the High School and Middle School create a more comfortable environment for both students and teachers, while more efficient LEDs improve the quality of light in classrooms and offices District-wide. In addition to saving the District \$9.1 million in energy costs and protecting against future utility rate increases, the program showcases the District as a leader in energy efficiency and renewable energy technology. MBUSD was honored by the U.S. Department of Education on Earth Day 2016 for its efforts to reduce negative environmental impacts. As a result of the improved efficiency of its facilities, the District will cut CO₂ emissions equivalent to removing 366 cars from the road each year.