

Keppel Union School District (KUSD), Pearblossom, California

District-wide Lighting Upgrades



Estimated Annual Utility Cost Savings:
\$95,948

Total Utility Incentive Rebate:
\$221,839

Energy Savings:
564,403 kWh
10.5 kW

Cost to School District:
\$0

SUMMARY

When school district budgets are tight, energy efficiency is a lower priority—especially for smaller school districts in outlying geographic areas like Keppel Union School District (KUSD). With little to no funding to complete full facility lighting retrofit projects, investing in new energy efficiency projects can prove challenging. To keep their focus on energy management and improved energy efficiency, KUSD found creative ways to make change happen. This enterprising school district worked collaboratively with Willdan to find innovative, cost-effective ways to reduce energy. By applying utility rebate programs, the district dramatically reduced energy use at its six schools and two district facilities. Willdan provided over \$210,000 in labor and materials for energy-efficient lighting retrofit projects through utility incentives paid to the KUSD. The combined efforts for these eight projects helped KUSD save over \$95,000 annually in energy costs by saving over 564,000 kilowatt-hours (kWh) in electricity.

GOALS AND CHALLENGES

Creating a Smart, Sustainable Learning Environment

Willdan's primary goal in implementing the district-wide retrofit project for KUSD was to provide maximum energy savings and demand reduction while also emphasizing quality and safety during the installation process. Willdan's primary challenge in implementing this overall project was to ensure customer satisfaction by providing high-quality installation work while also adhering to an "off-hours" schedule in order to ensure student safety. KUSD had prior experience with other contracting firms, with varied results, and keeping district staff comfortable with the retrofit projects while gaining the district's trust was a major goal. Willdan worked at one facility at a time, finishing one project prior to starting the next, so that district personnel could review the completed work and ensure that it was to the district's satisfaction. Upon completion of the second project, and based on the high quality of the completed work, the district elected to allow Willdan to work on multiple projects simultaneously. This close coordination between Willdan staff and District staff was the most important factor in the successful implementation of the overall energy upgrade.

SOLUTIONS AND OUTCOME

Designed for Safety

Willdan installed lighting retrofits at eight KUSD facilities. Our team provided a much-needed service to the district, identifying and replacing T-12 fluorescent lamps and magnetic ballasts with higher efficiency options. By complementing this effort with fixture de-lamping and occupancy sensor installation, the facility retrofit projects provided the district with significant energy savings and demand reduction, as shown on the table below. For quality assurance, Willdan inspected 100% of all projects, and provided a one-year warranty on all workmanship, with additional warranties on materials.



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“ [Willdan] provided excellent service during the entire process while working with our district and the work was done in a timely and efficient manner. The Program Manager was very knowledgeable and helpful in explaining the services Willdan provided, which will compel me to work with them in the future if needed.”

—John Gamlowski,
Director of Facilities KUSD

KUSD At a Glance: Summary of Savings per Facility

Facility	Project Cost	Annual kWh Savings (Energy Savings)	Annual kWh Savings Demand Reduction)	Annual Energy Cost Savings
Elementary Schools				
Alpine Elementary	\$36,853.02	99,231	2.0	\$16,869.31
Antelope Elementary	\$23,676.34	78,612	1.2	\$13,363.97
Daisy Gibson Elementary	\$43,401.85	109,601	2.3	\$18,632.22
Pearblossom Elementary	\$37,855.33	98,612	2.0	\$16,764.07
Intermediate Schools				
Lake Los Angeles School	\$37,191.61	87,746	1.6	\$14,916.86
Keppel Academy	\$25,076.24	73,356	1.0	\$12,470.45
District Facility				
Keppel District Office	\$3,741.92	14,136	0.2	\$2,403.05
Support Services/Maintenance/Nutrition	\$4,043.33	3,109	0.1	\$528.58
Total	\$211,839.64	564,403	10.5	\$95,948.51



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