

## KSI Improves Pool Equipment Energy Efficiency

# Case Study

### Background

This KSI case study is based on the Chowchilla Union High School District (CUHSD) located in Chowchilla, California.

### The Problem

In an attempt to save money on utility costs, the Chowchilla Union High School District received an audit from the Resource Solutions Group (RSG) under the School Energy Efficiency (SEE) Program. A great opportunity for savings found in the audit was installing a Variable Speed Drive (VSD) for their pool pump.

### The Solution

CUHSD selected an advanced VSD package with KSI, an Aquafinity company. This package includes specialized controls to monitor pool water flow that works in conjunction with automatic backwash and chemical systems to ensure the proper operation of all pool equipment. The VSD was attached to a 30-hp pool pump motor that previously ran uncontrolled 24/7.

This meant that the pool's flow rate was substantially higher than what was needed by health standards during the clean filter cycles when the pump was only lightly loaded. The pool pump motor now operates with a slower average speed thanks to the installation of the sophisticated VSD with customized controls. To maintain the required health standards, the water circulation in the pool is automatically monitored and adjusted. The sophisticated VSD also reduces the amount of water circulating in the pool when the facility is not in use to keep it clean and conserve electricity.



## The Results

The chart below shows that the district's project will pay for itself in under two years, saving a large sum on utility costs. Before, during, and after installation, the RSG supported the district by identifying this important energy-saving measure, liaising with them for project approval, and providing the final incentives for the project.



### Pool Pump VSD

**\$29,470**

INSTALLATION COST

**1.8**

SPB

**\$6,880**

REBATE RECEIVED

**61.0%**

IBR

**\$22,590**

NET COST

**\$157,174**

NPV

**\$12,900**

ANNUAL SAVINGS