

### DECISION INTELLIGENCE

## Investment Grade Energy Audits

### PROJECT DETAILS

EMG was contracted by Low Income Investment Fund (LIIF), California to conduct an investment grade energy audit of two public charter schools in the Los Angeles metropolitan area. The purpose of the audit was to provide the LIIF with a baseline of energy usage, relative energy efficiency of the facility, and specific recommendations to optimize the energy performance of the buildings, improve reliability, reduce overall energy consumption at the facilities, and provide loan underwriting guidance.

EMG performed a comprehensive energy audit of the two facilities within the projected timeframe, and delivered final reports with energy optimization recommendations. EMG assembled a multi-disciplined project team, led by a certified energy manager, to conduct the audits. The engineering team surveyed all building HVAC systems, lighting, operations, controls, structural elements, envelope, R-values of components, and energy management controls systems. EMG utilized EQuest Energy Modeling software to create and analyze an in-situ profile of the facilities' energy profile. Based on the information gathered in the field, review of utility rates, and interview of field engineers and field records, EMG identified opportunities for energy savings, reductions in fossil fuel emissions, and projected energy and utility savings.

EMG provided LIIF with a final report that identified recommended ECMs and operational changes for the schools. Some recommendations included adding thermal insulation, lighting control systems, HVAC system controls, natural day lighting systems, and domestic hot water modifications. EMG found that the buildings were constructed as very high performing energy and sustainable buildings. However, the EMG team was still able to find opportunities for energy savings.



**ORGANIZATION**  
Department of Education  
Lender Underwriting

**SERVICE PROVIDED**  
Investment Grade Energy  
Audit

**BUILDING TYPE**  
Public Charter School

**DURATION**  
Apr 2010 – May 2010

**PROJECT ELEMENTS**  
EMG Role: Prime  
Size: 2 buildings;  
65,000 SF  
Cost: \$15,000