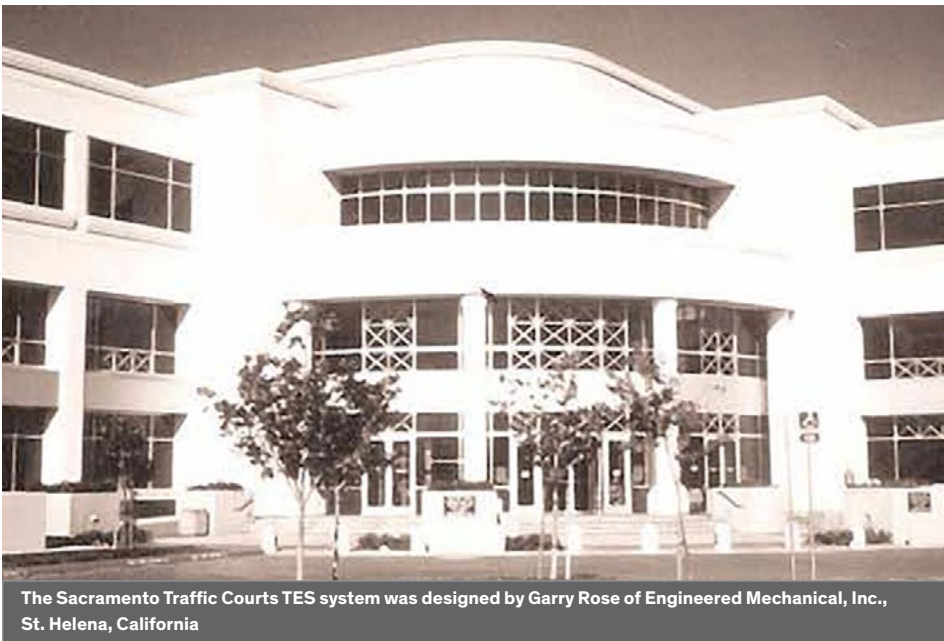




Dow Industrial Solutions

Traffic Courts TES System Reduces Energy Costs

Case Study



The Sacramento Traffic Courts TES system was designed by Garry Rose of Engineered Mechanical, Inc., St. Helena, California

A thermal energy storage (TES) system installed at California’s Sacramento County Traffic Courts building allows the county to shift much of its electricity consumption to nighttime, where off-peak

rates are as much as 50 percent lower. In addition, by reducing its peak hour electrical demand, the county qualifies for significant utility company rebates.

The TES system uses four-inch plastic water-filled spheres, known as ICE BALLS[†], and DOWFROST[™] Inhibited Propylene Glycol-based Heat Transfer Fluid made by The Dow Chemical Company. At night, the ice balls are frozen solid by being bathed in a 28 percent solution of DOWFROST[™] chilled to -4°C (25°F). During the day, the glycol solution is warmed by heat from the building and passed over the ice balls. The warm solution melts the ice and is cooled in the process. It is then recirculated to cool the building.

“This system provides economic benefits for all concerned,” said Victor Ott, president of Cryogel, Inc., which markets the TES system.

“The public utility benefits from a more balanced energy load and the county and the tax payers benefit from reduced operating costs.”

[†]Trademark of Cryogel

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