

# Re-energizing Tulare County

With a population of approximately 368,000 and spanning nearly 4,863 square miles, Tulare County, California sees its fair share of energy expenses. Centrally located midway between San Francisco and Los Angeles, the County's geographically rich location has allowed it to become the leading producer of agricultural commodities in the United States today. In addition to these agricultural businesses, Tulare maintains a substantial number of packaging and shipping operations, with light to moderate manufacturing plants also becoming an increasingly important aspect of the County's economic structure.

## The Need for Energy Management

With so much industry development in addition to its large and growing population, the County needed to make improvements to its energy management processes. However, the additional funding necessary to complete these and other needed projects would not be provisioned through a grant by the state. It would be the role of Invensys Energy Management to design a performance contract that would allow Tulare to finance these expenditures without actually needing the funds to do so immediately in-hand.

Approximately two years ago, Invensys competed through a Request for Qualification/Request for Proposal process to win the contract with Tulare County for the modernization of its facilities. Under the terms of the performance contracting agreement, payment would be based on performance, with a guarantee that costs would not exceed energy savings.

"Tulare County, like all California counties, is facing severe budgetary constraints," said Deb West, Assistant Director of the Resource Management Agency in Tulare. "Entering into this project with Invensys provides the County the opportunity to make needed equipment enhancements and replacements, which pay for themselves through energy savings."



## Financing That Pays for Itself

The performance contract value of the Invensys agreement with Tulare County totaled at \$11 million. The modernization of facilities and renovations would equal more than \$1 million in annual energy savings. With financing over 15 years, the County would actually come out ahead! The performance contract is guaranteed self-funded, with no out-of-pocket expense for the County—in addition to expected incentives from utility companies of more than \$400,000!

"Entering into this project with Invensys provides the County the opportunity to make needed equipment enhancements and replacements, which pay for themselves through energy savings."

## Innovations in Energy Management

The County of Tulare would not be the first in California to take advantage of Invensys Energy Management services. Under the terms of the performance contracting agreement with Tulare, renovation of the County's facilities would generate abundant guaranteed savings in energy costs similar to those already achieved by Invensys at numerous other California sites. In designing a modernization strategy for Tulare County, Invensys discovered the following opportunities to improve efficiency:

- ▶ Replace/retrofit air conditioning and heating systems in 34 buildings
- ▶ Conduct a major renovation of air conditioning and heating systems at Visalia
- ▶ Systems upgraded to the latest technology available
- ▶ Increased efficiency of operations staff
- ▶ Improved comfort due to new air conditioning

chilled water is then used during the day for air conditioning. With tanks measuring approximately 50 feet in diameter x 32 feet in height, these storage systems would be installed at Visalia Courthouse, Tulare County Government Center, and Visalia Juvenile Justice Center.

### Looking to the Future: Long-Term Benefits for Tulare County

In addition to self-financed modernization of the County's facilities, the project would include numerous other benefits to Tulare, both technological and environmental:



Courthouse, Main Jail, Tulare County Government Center, Visalia Juvenile Justice Center, and Bob Wiley Detention Facility

- ▶ Retrofit lighting in 61 buildings
- ▶ Install computer-based energy management systems in eight buildings
- ▶ Build a new roof for Visalia Courthouse
- ▶ Place co-generation units to produce on-site power and hot water in two buildings
- ▶ Install thermal energy storage systems in three buildings

One of the most innovative aspects of the project would be the installation of thermal energy storage systems. Large tanks are used to store chilled water, which is produced at night to take advantage of cheaper electricity costs. The

- ▶ Increased productivity as the result of new lighting
- ▶ Ground water no longer used at Visalia Courthouse for air conditioning
- ▶ Harmful substances eliminated annually: carbon dioxide = 2,240 tons; nitrous oxide = 13,162 pounds; sulfur dioxide = 7,890 pounds
- ▶ Environmental benefits of the project equivalent to planting 1,482 trees per year
- ▶ Invensys Global Services manages entire project, with sole source responsibility

As a result of this partnership with Invensys Energy Management, Tulare County sees a brighter future ahead. With modernization of the facilities about to begin, West enthused, "It's a win/win solution for all involved!"