



CALIFORNIA CORRECTIONAL INSTITUTION

Tehachapi, California



\$1MM

Verified Annual Savings

6.3MM KWH

Annual Electricity Savings

71,000 K

Therms Natural Gas Saved (yr)

At a glance

CEG Solutions developed and implemented an \$11MM ESPC at the California Correctional Institution (CCI), to address critical infrastructure, enhance site security, and modernize systems.

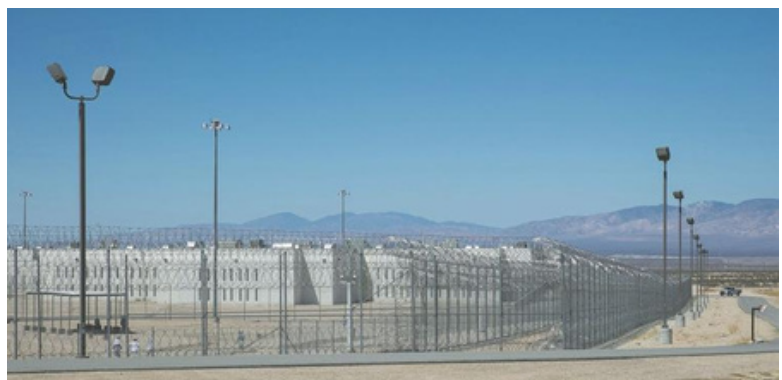
OVERVIEW



The sprawling CCI campus includes classrooms, housing, kitchens, gyms, and a wastewater treatment facility. Aging systems created operational challenges and high energy costs, while the prison’s controlled environment demanded strict adherence to security protocols. CEG was tasked with delivering cost-neutral solutions that would modernize critical infrastructure, improve comfort, and enhance resilience without disrupting secure operations.

Project Highlights

- \$11MM ESPC across a 1,650-acre, 1.25MM SF campus
- \$1MM verified annual savings
- 6.3MM kWh electricity & 71K therms natural gas saved annually
- 25% average EUI reduction
- \$485K utility incentives secured
- Advanced SCADA control & remote monitoring capabilities



STRATEGIES



Building Performance Compliance, Energy & Operational Efficiency, Energy Audits, Incentives, Performance Contracting, Resiliency



Energy Conservation Measures

- Boiler plant improvements & blowdown heat recovery
- AHU mechanical & controls upgrades (motors, VFDs, local controls)
- 13,000 LED lighting retrofits (indoor & outdoor)
- Wastewater treatment upgrades: UV lamps, blowers, dissolved oxygen control
- XiO cloud-based SCADA monitoring & control system

SOLUTIONS



CEG implemented upgrades across multiple systems. Boiler improvements and blowdown heat recovery reduced thermal losses, while new motors, VFDs, and controls were installed on AHUs to align HVAC operation with occupancy. Over 13,000 interior and exterior fixtures were replaced with LEDs. At the wastewater treatment plant, industrial controls upgrades included new UV lamps and ballasts, VFDs and controls for aeration blowers, and optimized dissolved oxygen setpoints. A cloud-based XiO SCADA system was deployed to monitor and trend performance, giving operators remote visibility and control. Additional programming in the water pump SCADA system reduced demand charges during summer and peak winter hours.

RESULTS



The project delivers \$1MM in verified annual cost savings, with 6.3MM kWh electricity and 71K therms natural gas saved annually. The site achieved a 25% reduction in average EUI and secured \$485K in incentives. Remote SCADA monitoring improved visibility, cut peak demand charges, and provided resilience for mission-critical systems. Infrastructure modernization also reduced O&M costs and improved comfort across the secure facility.

