

Energy Savings Program: Case Study

DGS Office of Sustainability



East End State Office Complex



DGS Office of Sustainability's Energy Savings Program (ESP) helped the East End Office Complex in downtown Sacramento achieve key energy efficiency projects across 5 large office buildings of 1.7 million sq ft. This complex was initially constructed in 2003 to be LEED Gold certified. After the 2023 energy savings project, the site's average energy usage intensity (EUI) was reduced by 26%.

Annual Savings from Project:

- \$953,000 on energy bill
- 6.2 million kWh of electricity
- 45,000 therms of natural gas
- 448,000 gallons of water

The Need:

The East End Complex serves as the Sacramento headquarters for several state agencies. Due to the age of the buildings, there were three failed natural gas chillers serving 80% of the facility. Additionally, the outdated building controls were leading to an overuse of the HVAC system and lighting.

DGS ESP Services Performed:

- Lighting, HVAC, and Chiller upgrades
- Building automation system upgrades
- Utility rebate and incentive process tracking
- Project financing
- Building energy audits
- Measurement & verification of energy savings



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DGS ESP Solution:

An investment grade audit (IGA) performed on the East End complex by the energy savings company, CEG Solutions, identified three facility improvement measures (FIMs) that facilities leadership targeted for the project: 1. LED Lighting upgrades and controls inside and outside of the buildings, 2. Chiller plant improvements for the building data center and telecom rooms including variable frequency drives (VFD), and 3. Building automation system (BAS) control improvements for the HVAC system.

The verified savings associated with each measure will pay for the complete project in just 13 years.

Verified Savings at the East End State Office Complex

FIM No.	FIM Description	Electric Savings (kWh/yr)	Natural Gas Savings (therms/yr)	Total Cost Savings (\$/yr)
1	Lighting Upgrades	3,636,098	-33,678	\$502,886
2	Chiller Replacement	452,451	0	\$65,546
3	HVAC Controls	2,170,433	79,108	\$385,552
	Total Savings*	6,258,983	45,430	\$953,983

*The total exceeds the sum of the 3 listed measures due to auxiliary upgrades performed during the project

