



U.S. OFFICE OF PERSONNEL MANAGEMENT (OPM) PHASES I-III

Washington, D.C.



\$1.7 MM

Verified Annual Savings

24,100 MMBTU

Verified Annual Energy Savings

6.2MM GAL.

Annual Water Savings

At a glance

CEG Solutions partnered with OPM to modernize buildings through three phases of ESPC projects, delivering deep energy retrofits that cut utility costs, boosted resiliency, and set a new benchmark for sustainable federal facilities.

Project Highlights

- Replaced outdated steam infrastructure with new hot-water boiler plant
- N+1 redundant heating system, 2N redundant domestic hot water system & emergency power interconnection to improve resiliency
- 58% energy reduction
- \$1.7M in annual savings
- 24,100 MMBtu saved annually
- 6.2M gallons of water savings per year
- \$2.3M in utility cost savings from Phase I-II
- \$1.5M DOE AFFECT grant leveraged for Phase III resiliency upgrades

OVERVIEW



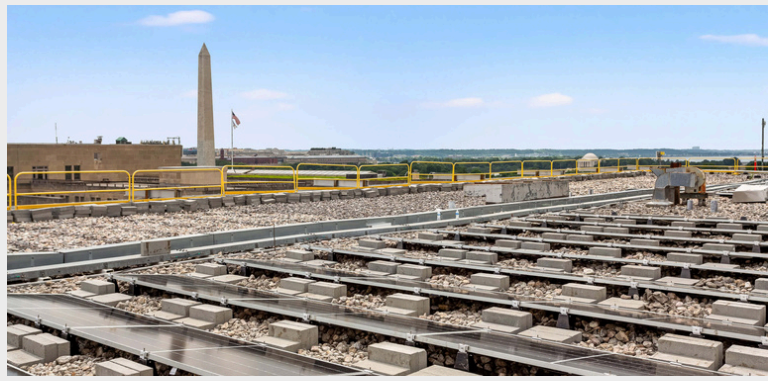
The OPM HQ in Washington, DC — a hub for administrative offices and mission-critical IT — had already seen major efficiency gains under prior ESPC projects. Still, its data center operated with an elevated PUE that fell short of federal standards. CEG was tasked with modernizing the facility to meet CIO goals, enhance resiliency, and continue OPM's progress toward deep energy savings.



STRATEGIES



Deep Energy Retrofit, Electrification & Carbon Reduction, Energy & Operational Efficiency, Energy Audits, Financial Structuring, Performance Assurance, Performance Contracting, Resiliency



Awards

- 2020 DOE Federal Energy & Water Management Award
- 2021 DOE Better Buildings Integrated Lighting Campaign – HVAC Integration Recognition

Energy Conservation Measures

- High-efficiency condensing heating & domestic hot water plant
- LED lighting retrofits & advanced lighting controls (incl. daylight harvesting)
- Airside retrocommissioning
- High-efficiency AHUs with variable speed fan walls
- Air distribution upgrades & VAV conversions
- Cooling tower controls upgrade
- Kitchen appliance replacement
- Chiller plant modernization & right-sizing
- Variable speed pumping upgrades
- Demand-control ventilation
- Utility rate adjustments
- Irrigation controls & upgrades
- Domestic water fixture replacements

SOLUTIONS



Across three phases, CEG deployed a comprehensive retrofit strategy. Phase I introduced lighting, controls, and chiller upgrades. Phase II expanded the effort, converting steam systems to hot water, modernizing chillers, retrofitting AHUs, and deploying advanced controls. Phase III adds resiliency measures, cooling system retrofits, retrocommissioning, and solar PV replacement. Each phase leveraged detailed whole-building energy modeling to capture interactive effects and maximize performance.

RESULTS



Phases I–II cut energy consumption by 37,670 MMBtu and reduced utility costs by \$2.3M annually, Phase III is projected to further lower consumption by 14% while strengthening data center resiliency and modernizing core infrastructure. The combined approach has reduced plant capacities by 25%+, improved comfort, and supported OPM's long-term sustainability commitments.

