



# CITY OF DOWNEY

Downey, California



## \$10MM

Savings Over Program Lifetime

## 1.6 M3

Solar PV System w/ PPA

## 2.2 MWH

Battery Energy Storage

## At a glance

CEG Solutions partnered with the City of Downey to implement a renewable energy and resiliency program across critical municipal facilities, including a 1.6 MW solar PV system with PPA and 2.2 MWh battery energy storage.

## Project Highlights

- 1.6 MW solar PV & 2.2 MWh battery storage (BESS)
- \$475K utility cost avoidance in Year 1
- Net \$150K+ annual savings through PPA structure
- \$10MM total lifetime savings projected
- 76% CO<sub>2</sub> emissions reduction across facilities
- Includes microgrid controllers with real-time monitoring & resilience strategies
- Phase II: EV charging & efficiency measures underway

## OVERVIEW

Downey sought to modernize its municipal infrastructure while ensuring reliable power and cost stability for essential services. CEG structured a Power Purchase Agreement (PPA) that leveraged federal tax credits and incentives, delivering on-site solar power at a cost lower than grid electricity. The phased program ensures Downey's long-term energy needs are met through renewable generation, storage, and future efficiency upgrades.



## STRATEGIES

Energy & Operational Efficiency, Financial Structuring, Performance Contracting, Resiliency



## Energy Conservation Measures

- Solar PV arrays (rooftop & parking canopy)
- Battery Energy Storage Systems (BESS) – 2.22 MWh total
- Microgrid controllers with real-time monitoring
- Net Energy Metering Aggregation (NEMA)
- Planned EV charging infrastructure (Level 2 & 3)
- Planned energy efficiency upgrades (Phase II)

## SOLUTIONS



CEG designed and installed rooftop and parking canopy solar PV arrays across city facilities, using hybrid racking to minimize roof penetrations and preserve warranties. Four 250 kW battery energy storage systems (2.22 MWh total) were integrated with microgrid controllers, enabling real-time monitoring, peak load management, and resilience strategies. Net Energy Metering Aggregation allowed Downey to offset electricity usage across smaller facilities by leveraging generation at larger sites. Phase II, now underway, includes EV charging infrastructure and energy efficiency measures to further maximize sustainability and cost-effectiveness.

## RESULTS



Phase I delivers \$475K in verified Year 1 cost avoidance, producing 2.68M kWh annually, with net annual savings of \$150K+ after PPA costs. The city achieved a 76% reduction in CO<sub>2</sub> emissions across its facilities. Over the program lifetime, total utility cost avoidance is projected at \$10MM, with resilience and reliability enhanced through on-site renewable generation, battery storage, and microgrid controls.

