



THE ENGINEERING PARTNERS, INC.
CONSULTING ENGINEERS

CAPABILITY STATEMENT



COMPANY PROFILE

Incorporated in 1985, The Engineering Partners, Inc. (EPI) is an electrical engineering and design firm specializing in utility infrastructure projects and industrial power system projects. With a workforce of over 150 employees, our team provides owner's engineer services and engineering and design services with a demonstrated track record in ensuring the success of our client's programs.

CONTACT + DESIGNATIONS

The Engineering Partners, Inc.

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NAICS CODES

541330: Engineering Services
541340: Drafting Services
SIC Code: 8711 Engineering Services

FIRM EXPERTISE

- Wildfire Mitigation and Electric System Hardening
- Electric Distribution Engineering and Design
- Substation Engineering and Design
- Electrification and Renewable Energy
- Battery Storage
- Industrial Engineering
- Waterfront Shore Power
- Water/Wastewater Power Systems
- Service and Switchboard Replacements and Upgrades

SERVICES

- Owner's Engineering
- Engineering and Design
- Data Management
- Utility Program and Project Consulting

WILDFIRE MITIGATION + ELECTRIC SYSTEM HARDENING

SDG&E Fire Risk Mitigation Program (FiRM) Owner's Engineering Services

Since 2014, the EPI team has been delivering owner's engineering services for SDG&E's wildfire mitigation programs, including FiRM, Cross-Arm Remediation, and Private LTE, as well as other overhead distribution projects. Our role involves program development, engineering and design quality reviews, and document control. We ensure that construction packages meet GO95, SDG&E standards, and program requirements for overhead, underground, and SCADA projects. Additionally, we manage the construction RFI process, coordinate with the utility's Electrical Design Engineering group on standards updates and deviations, provide recommendations for program direction, offer technical guidance and QA/QC for post-construction adjustments, and develop detailed scopes of work for contract designers.



EPI worked with the client to develop cost savings measures which totaled over \$100k per mile by reducing redundant survey scope.

These projects require multiple easements, delaying the schedule and increasing costs. EPI developed a process significantly reducing the number of easements, resulting in schedule improvements and reduced costs.

SDG&E Strategic Undergrounding (SUG) Owner's Engineering Services

In 2020, SDG&E updated their Wildfire Mitigation Plan which included initiatives in strategic undergrounding of overhead power lines. Our team has successfully developed and published technical program direction to ensure a consistent design product meeting the utility's technical and construction standards from five engineering and design firms. To date, our team has performed quality reviews of over 80 miles of conversion work. EPI has proposed and executed numerous initiatives that resulted in significant schedule improvements and program costs reductions while maintaining safety and infrastructure reliability.

ELECTRIC TRANSMISSION AND DISTRIBUTION

Transmission Engineering

At EPI, our team of over 65 PLSCADD engineers and specialists handles utility transmission, sub-transmission, and distribution projects. We're collaborating with Southern California Edison's Transmission Engineering Team to model long spans using PLS CADD and PLS POLE. Our work includes thorough quality reviews of H-Frames and Tubular Steel Poles (TSPs) to ensure compliance with transmission overhead construction standards (TOH), distribution overhead construction standards (DOH), pole landing manual (PLM), and GO95 standards. We also model existing structures for safety analysis and future planning, and test new hardware through detailed span modeling to support advanced infrastructure solutions.

Electric System Reliability

Since 2015, EPI has partnered with SDG&E's Reliability Team on various projects, including cable replacements, switch installations, and Public Safety Power Shutoffs (PSPS). We have also collaborated with the Construction Standards Team to introduce and install new equipment. Our ongoing work supports SDG&E's mission to maintain a resilient and reliable electrical grid.

Overhead to Underground Conversion

EPI has designed numerous Overhead to Underground Conversions. EPI provides the engineering, design including the development of construction package for bid as well as coordination with all stakeholders; including all impacted customers, the communication companies, and utility.

ELECTRIFICATION + RENEWABLE ENERGY

The EPI team has provided designs for both ground mount and rooftop photovoltaic systems, battery storage systems, and is involved in the designs of thousands of electric vehicle charging stations at hundreds of sites, PRP Fleet Electrification projects, and Medium Duty/Heavy Duty EV Charging Infrastructure projects.

Eckhoff Street Orange Grid Storage Solution Implementation

This pilot project included the installation a fully integrated Grid Storage Solution (GSS) in Orange, CA. Partnered with Baker Electric, the EPC contractor, the EPI Team provided engineering and design of the GSS, which included **PV system**, 2.5MW/3.9MWh **battery storage system**, power conversion equipment, a transformer, and switchgear various components and systems. The project was coordinated and integrated with NEC (the manufacturer) and Southern California Edison (SCE), who were responsible for providing additional systems and materials.

Naval Weapons Station, China Lake

EPI provided design of a ground mounted, **photovoltaic (PV) system** with a peak power generation capacity of 200 KW, paralleled with generator and **battery storage** in a conditioned building at Naval Weapons Station, China Lake. The system operates independently from the utility grid. In addition, EPI has provided electrical engineering and design serves for rooftop PV systems at multiple military locations not limited to: Twentynine Palms (97KW), Naval Base Coronado (200 KW).



Department of the Navy, Install Electric Vehicle Infrastructure – Phase 1

EPI teamed with Synergy Electric (general contractor) for the design-build project to construct 14 new dual-port pedestal mounted Level 2 **electric vehicle charging stations** in 10 sites throughout Marine Corps Base (MCB) Camp Pendleton. EPI performed site investigations, engineering design, calculations, and preparation of specifications. Design includes providing pole-top transformers and connect to existing overhead 12kV lines to power the EV stations. Each EV charging station has radio frequency interface device (RFID) capability to activate the equipment.

SDG&E Power Your Drive

This program is designed to increase adoption of electrical vehicles and integrate electric vehicle charging with the grid throughout SDG&E's service territory with the goal of reducing greenhouse gases. EPI has provided the engineering design and preparation of complete construction packages for the construction of Power your Drive facilities, including utility plans. Projects include: **Aladdin Parking Garage Green Shuttle** which included installation of DC Fast Chargers in the parking garage to support new Lightning Electric Ford E-450 shuttle buses. The package also included **Amazon Priority Review Project Fleet Electrification** project. EPI provided electrical engineering design for the installation of (16) units of 14.56kW Level 2 charging stations in the parking lot to support new fleet of Amazon electric delivery vans.



Cajon Valley Union School District – Vehicle to Grid (V2G) Pilot

EPI led this pilot project as a collaboration project between SDG&E, the Cajon Valley Union School District (CVUSD), and Nuvve (charging station manufacturer) for the installation of six 60kW bi-directional DC fast chargers at CVUSD Transportation Department. The charging stations have **V2G capabilities** and intend to operate the vehicle batteries as a battery energy storage system to discharge surplus energy to the utility grid during peak demand hours. Our engineering design included coordination with the EV charger manufacturer regarding wiring requirements and RGS conduit to prevent communication lines interference.

POWER ENGINEERING

Our team is responsible for the preparation of construction plans, specifications, and cost estimates for various electrical transmission and distribution projects. These projects include new lines, undergrounding, service and switchboard upgrades and replacements, central cooling and heating plants, 10-2500 kW generators, OH to UG conversions, 15 to 160 MVA, and 69-12kV substations, water/waste water power infrastructure and P&ID systems, variable frequency drives, waterfront shore power, airfield lighting and landing systems, short circuit, coordination and load flow studies and much more.

NASA Advanced Supercomputer Facility Electrical Supply Reliability Improvement Project

NASA Moffett Field was in need of an uninterruptible source of power for their supercomputer facility. This project modified the existing infrastructure and provided three-diesel generator driven Rotary type Uninterruptible Power Supply (RUPS), complete with full system switchgear and auxiliary systems in an outdoor enclosure. Equipment arrangement fully capable of accommodating an additional RUPS unit operating in parallel for a total plant capacity 8MW/10MVA.



Metropolitan Water District (MWD) Colorado River Aqueduct Switchyard and Head Gates

EPI was the lead design firm and engineer of record for the design build project led by Southern Contracting for the Metropolitan Water District (MWD). This project included electrical system upgrades at Intake, Gene, Iron Mountain, Eagle, and Hinds Colorado Aqueduct Pumping Plants which furnish most of the water to Southern California from the Colorado River. Our team replaced the 34.5 kV Peddler Substation at Gene Pumping Plant, circuit breakers, AC and DC circuit breaker control wiring, CT wiring and modified ATS controls in the Gene pump station, replaced 300 current transformers, power distribution system for all five head gates at each outfall, and P&ID drawings for head gates.



Naval Base San Diego South Cummings Substation Upgrade

EPI was the Engineer of Record for the reconfiguration and expansion of Naval Base San Diego South Cummings Substation including the reconfiguration of utility interconnections and secondaries.

Project increased the Naval Base's electrical service resiliency, capacity, operation flexibility, and maintainability, resulting in a modernized and user-friendly substation with improved personnel safety.

F-35 Joint Strike Fighter Simulator Facility and Electrical Upgrades

EPI provided engineering and design as well as project engineering and technical support through construction including the expansion, repair, and renovation of the high to medium voltage OPS Substation. Scope of this project included the construction a new PG&E metering station, 3.5 miles of new overhead and underground transmission line, modification of Navy owned overhead 70 KV transmission line, expansion, and reconfiguration of switchyard and equipment, medium voltage switchgear and a complete SCADA/Utility Control System for remote monitoring and control of all major substation components including building subsystems fiber optic communication infrastructure.

Olivenhain Hodges Pumped Storage Project

Our team provided electrical engineering and design for a substation with 69kV switchyard, two 28MVA 69-12kV transformers, and 12 kV switchgear connected to two 23 MW, 12 kV pump/generator units. Our scope included grounding, arc flash study, protective device coordination study, time current curves, short circuit and coordination analysis and preparation of interconnect wiring schedules for hundreds of power/control/instrumentation cables and cable tray systems.

