

Capability Statement

EPI

CONSULTING ENGINEERS



Company Profile

Incorporated in 1985, The Engineering Partners, Inc. (EPI) is a California based engineering consulting firm specializing in utility infrastructure projects. We are a Minority Business Enterprise (MBE) certified by the California Public Utilities Commission (CPUC) with a workforce of over 110 employees.

Contact & Company Designations

Contact

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Date Established: March 1985

NAICS Codes

541330: Engineering Services

541340: Drafting Services

SIC Code: 8711 Engineering Services

Wildfire Mitigation and Electric System Hardening

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

Since 2007, SDG&E has invested \$1.5 billion in fire risk mitigation. This includes robust efforts to fire harden the power grid with programs such as the Fire Risk Mitigation (FiRM) program which modernizes critical and aging infrastructure. Since 2014, our team has been and continues to provide owner's engineering services for this program as well as other overhead distribution projects including engineering and design quality reviews and document control services. Our team has developed and documented processes, procedures, and metrics for PLS-CADD and design reviews ensuring construction packages meet GO95, SDG&E, and program expectations for overhead, underground, and SCADA jobs. As needed, EPI meets with the various contract design and engineering firms to provide feedback, discuss improvement opportunities, and share knowledge. In addition, as Owner's Engineer, EPI facilitates and manages the construction RFI process, coordinates with SDG&E's Electrical Design Engineering (EDE) group to discuss standards updates or deviations, provides written summaries to SDGE for program direction, provides technical direction and QA/QC for post construction true up and true up remediation processes, and develops explicit scope of work for contract designer to carry out projects. To assist the SDG&E with management, our team developed QC metrics comparing various contractor's submittal quality and identifies process improvements to increase production and reduce confusion. EPI also provides project coordination and management scope including managing the true up and true up remediation processes, managing aft the various submittals and transmittals ensuring completeness and revision control, assisting in developing RFP scope of work, and tracking and issuing of FCOs.



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

In 2020, SDG&E updated their Wildfire Mitigation Plan which outlines a suite of programs and initiatives that the utility is undertaking to advance wildfire safety. One of the initiatives is strategic undergrounding of overhead power lines. Burying power lines removes the risk of these lines sparking fires during adverse weather events, but more importantly, buried lines can remain energized during Public Safety PSPS events, reducing the impact of power outages to many communities. For the past two years, EPI has served as the Owner's Engineer for the SUG program. In this role, 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. In addition, EPI attends all job walks and all designs are reviewed and ultimately approved by EPI. When complicated issues arise with agencies, customers, or permits, our team leads the collaborative effort to identify the best possible solutions. Throughout EPI's time on SUG, we have proposed and executed numerous initiatives that resulted in significant schedule improvements and program costs reductions while maintaining safety and infrastructure reliability.

Electric Distribution Engineering & Design

Electric System Reliability

For more than eight years, EPI has worked with SDG&E as part of their Reliability Team. EPI has completed the design of a variety of reliability projects including, but not limited to cable replacements, new overhead and underground switch installations, DOE and SF6 switch replacements, Public Safety Power Shutoff (PSPS), overhead booster and ground bank removals, overhead to underground conversions. In addition, our team has also worked directly with the utility's Construction Standards Team to implement and install more than 13 new types of equipment to meet their changing needs. New equipment includes innovative switch gear switches, programmable relay switches, SCADA submersible switches, MVI's and 200A/600A 12kV terminating cabinets. As part of the Reliability Team, we continue to support a resilient and reliable electrical grid for SDGE.



New Business

Over the course of the past twelve years, EPI has worked with SDGE's Planning Department in support of New Business projects. Our team has collaborated with Builders, Land Developers, and various City and County Agencies on behalf of their projects. Said projects include Master Planned Communities, Single Family and Multi-Family Subdivisions, Affordable and Senior Housing projects, School Districts sites, Commercial and Retail Developments plus City and County Redevelopment projects. Our team has provided management, utility coordination and applicant design services for housing and development communities in San Diego and Orange County. This includes over 50,000 residential lots/units and approximately 1,000,000 square feet of commercial and retail space. As the Liaison for the new projects, our work with SDGE requires us to complete Project Submittal Requests, Utility Designs, Load Studies, Distribution Planning Worksheets, Fuse Request, Gas Sizing Requests, Permit Processing, Environmental Review forms and Land Rights processing for easements; etc. The process involves working on all types of underground electric and gas facilities, overhead pole line relocations and conversions, and transformer vault designs. Having excellent working relations with the SDG&E Planning Department and other internal SDG&E Departments has made for a rewarding experience for all parties involved.

Overhead to Underground Conversion

TEPI has designed numerous OH to UG Conversions throughout San Diego County. As an example, for the City of San Diego Block 4Y project, our team provided electrical design services for the Dry Utilities Undergrounding Program. This was a "20SD Conversion" which is a negotiated agreement between SDG&E and the City and approved by the CPUC. This project involved the replacement of overhead electric facilities with new underground electrical services for the conversion of 405 residences, one apartment complex and one commercial mall in the Block 4Y area (San Diego Skyline Area). First task involved all the field investigations which included surveying all private commercial and residential service meters, and all utility poles that were going to be removed. Second task required the design and development of all the deliverables including: Trench & Conduit Plans, Cable Plans - Single Lines, Cable Poles, Removal from Service Drawings, Service Worksheets, creating all the DBL's (Design by Location) in the SDG&E DPSS program, Right of Entry letters and 9 easements. EPI led the design and coordination with multiple communication companies and assembled a construction package for bid. The bid set includes the Conversion Package, the Communication joint trench work, City Designed Street lights, City Designed ADA sidewalk curb ramps, and street resurfacing improvements.

Industrial Engineering Group

Our team is responsible for the preparation of construction plans, specifications, and cost estimates for various customer side of the meter electrical distribution projects. These projects include new distribution pole lines and undergrounding, service and switchboard upgrades and replacements, central cooling and heating plants, 10-2500 kW generators, OH to UG 15 kV conversions, 15 to 160 MVA, and 69-12kV substations, water/wastewater power and PNID systems, 600 volt and medium voltage variable frequency drives, waterfront shore power, airfield lighting and landing systems, short circuit, coordination and load flow studies and much more. Our clients include NAVFAC and UCSD.

Substation Engineering & Design

For nearly 20 years, EPI's professional engineers have provided electrical engineering design for substations for entities such as the U.S. Navy, UCSD, and the City of Riverside.

South Cummings 69KV-12kV Substation Upgrade, Naval Base San Diego

The project scope was the reconfiguration and expansion of South Cummings Substation at Naval Base San Diego to meet the growing electrical demand. Project included reconfiguration of the two SDGE interconnections, each with single circuit breakers to a six element 2000-amp rigid bus in a ring configuration using 72kV class SF6 filled circuit breakers with two positions for existing SDGE services, two positions to feed existing transformers, and two positions for the addition of two 40/50/60 MVA 69-12kV transformers with ALTC. Secondaries of each new transformer were connected to a reactor in parallel with a Current Limiting Protector (CLIP) to limit the flow of fault currents to levels acceptable for existing equipment downstream of the substation. 3000A 15 kV busduct connected to a 15kV indoor type switchgear in "Main-tier-Main" split bus configuration, with a total of 10 feeder breakers and underground outgoing feeders on both sides. EPI's design included the rearrangement of loads between new and existing portions of the substation and the upgrade of select circuit breakers in the existing switchgear. Project responsibility also included coordination of the design elements including protection and system coordination to meet all Interconnection Agreement requirements between the Navy and SDG&E. The design of the substation included a fully integrated SCADA system that can be monitored and controlled remotely via fiber optic connections. The 69KV side control and protective relays are in an integrated control panel inside the switchgear building. API feeder, bus, and transformer protection use SEL relays.

The newly upgraded substation can carry the anticipated load through 2030. EPI performed all studies including load forecasts, the 100% of the design, assisted client through the bidding process, and performed all construction related engineering services through completion of the project.

Electrifications

EPI has extensive expertise in the design of photovoltaic systems, electric vehicle charging stations as well as LEED certified tenant improvements. Our team has provided designs for both ground mount and rooftop photovoltaic systems, ensuring compliance with utility regulations, and is involved in the designs of over 3,000 electric vehicle charging stations at 360 sites, PRP Fleet Electrification projects, and Medium Duty/Heavy Duty (MD/HD) EV Charging Infrastructure projects.

SDG&E Power Your Drive

This program is designed to increase adoption of electrical vehicles and integrate the charging of electric vehicles with the grid throughout SDG&E's service territory with the goal of reducing greenhouse gases. Our team has provided the engineering design and preparation of complete construction packages for the construction of Power your Drive facilities, including utility plans.



Green Shuttle — Aladdin Parking Garage

Green Shuttle is part of SDG&E Clean Transportation's electric vehicle program approved by California Public Utilities Commission. Aladdin Parking Garage is one of SDG&E's customers who applied and was approved for the Green Shuttle program. The project installed DC Fast Chargers in the parking garage to support new Lightning Electric Ford E-450 shuttle buses. EPI provided electrical engineering design including the following: field standby verification, load study/fusing, voltage drop calcs, and environmental documents, design of #2 15kV medium voltage cabling from existing SDG&E manhole to new SDG&E service transformer, load calculations, design of main service metering equipment including #350 MCM 600V service conductors as well as wiring design to power the ChargePoint Express 250 with 480V, 3-phase, 80A input power and 62.5kW, 200-1,000V DC power output that service new shuttle buses.

Priority Review Project Fleet Electrification — Amazon

The project involved 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. Our team provided electrical engineering design including the following: load study/fusing, voltage drop calcs, environmental release, load calculations, detailed design of upsizing pole top 15kV fuses, intercepting spare conduit to new transformer location, new #2 15kV medium voltage cabling feed through from existing SDG&E transformer to new SDG&E service transformer, detailed design of main service metering equipment including runs #500 MCM 600V AL service conductors and wiring design to power BTC Power Level 2 Commercial chargers 208V, 1-phase, 70A (14.56kW) input / output power that will service new fleet vans including aft communication systems.

Architectural and Engineering (A / E)

EPI is responsible for the preparation of plans, specifications, cost estimates from conceptualization to construction for many different types of facilities such as commercial and office buildings, university buildings, K-12 Schools, and sustainability and renewable energy projects. Designs include alt interior and exterior power and lighting, telephone, data systems and special systems such as lightning protection, paging, clock systems, and security. This team has worked on various municipal and federal projects including the Navy, Marines, Army, and Custom and Border Patrol.



Differentiators

- EPI is a California based company and certified by the California Public Utilities Commission (CPUC) as an MBE.
- EPI's main point-of-contact is Lucy Labruzzo. As a principal and an owner of EPI, Ms. Labruzzo is empowered to readily allocate personnel and other resources needed to deliver each task order on time and on budget. The client can go directly to her without being encumbered by numerous levels of bureaucracy. Lucy is not just a figurehead on an organization chart — she is an engineer who will have a hands-on involvement with the development and delivery of each project.
- EPI has the benefit of recent and relevant experience with California utility projects. This provides us with the expertise to design in compliance with their standards, rules and regulations.
- Our firm is fortunate to employ individuals who are also former long-time electric utility employees. Their familiarity and valuable experience with utility processes allows us to provide these clients with cost-effective, high-quality designs and creative solutions to issues our clients may face. These veterans of utility industry all provide extensive in-house utility design training to our design team.