

Powersect Engineering Inc.

STATEMENT OF QUALIFICATIONS



Powersect Services

Practical, field-tested engineering support to help you plan, build, and operate grid, renewables, energy storage, and mission-critical data center power—faster and with no surprises.

- Owner's Engineering & Technical Advisory
- Interconnection Support & Grid Studies
- Substation, Collection System & As-built Design
- Protection, Controls & SCADA Design
- Construction Support, Testing & Commissioning
- Data Center – Mission-critical Power



INDUSTRIES WE SERVE

Journey to Resilient Smart Grids, Energy Infrastructure and Data Centers Through Strength and Dependability

Our teams of experts are integrated across multiple engineering disciplines—including electrical, civil, and structural—and are involved in all phases of the project lifecycle, from concept through implementation. We specialize in smart grids and utility interconnections, renewable energy, and mission-critical data center power, delivering comprehensive, multidisciplinary services that are reliable, scalable, and forward-looking. No matter the industry, we are committed to developing solutions tailored to each project and client—maintaining flexibility, agility, and performance within schedule and budget constraints.



Electric Utilities



Renewable Energy



Data Centers



Industrial Complexes

DESCRIPTION OF SERVICES

ELECTRICAL ENGINEERING

- Single-line diagram (SLD) development
- Connection impact assessment (CIA) application support
- Load flow, short-circuit, and arc-flash studies
- Insulation coordination and surge arrester selection
- Relay settings and protection coordination
- Procurement specifications

INDEPENDENT ENGINEERING

- Technical due diligence (BESS and substations)
- Design review and compliance assessment
- Site inspection and monitoring
- Bid review and evaluation
- Vendor/product evaluation
- Site and factory inspection support per approved ITPs

OWNER'S ENGINEER

- Owner's requirements and scope alignment
- Design review and compliance coordination
- Engineering coordination and interface management
- Procurement support and technical bid evaluation
- Construction, commissioning, and closeout support
- Vendor submittal/equipment review
- FAT/SAT witness testing and evaluation



DATA CENTERS – MISSION-CRITICAL POWER TIER III & TIER IV

- Utility interconnection & scalable MV/HV infrastructure
- Backup power integration
- Resilient power architecture (N+1 / 2N)
- Protection, controls & monitoring
- Relay settings and selective coordination
- Testing & commissioning
- Lifecycle reliability & maintainability





SPECIALTIES

FRONT-END ENGINEERING DESIGN AND RETROFIT

MISSION-CRITICAL DATA CENTER POWER

HIGH VOLTAGE SUBSTATION DESIGN

SOLAR / WIND POWER DESIGN

ENERGY STORAGE ENGINEERING

OWNER'S ENGINEER SERVICES

MICRO-GRID ENGINEERING

OFF-GRID POWER ENGINEERING

FAT/SAT WITNESS TESTING AND EVALUATION

HV/MV EQUIPMENT SPECIFICATIONS

POWER TRANSFORMER SPECIFICATIONS

BOS/BOP SPECIFICATIONS

PROCUREMENT SUPPORT

- Contract formation
- Technical appendices, statement of work
- Bid specifications and RFP composition
- Bid evaluation and management
- Design basis development and quantity takeoff calculations
- Procurement specifications

FORENSIC ENGINEERING

- Root-cause analysis and remedial measures using an SME-led approach
- Expert and technical review of change disputes
- Forensic engineering studies and reporting
- Counsel technical support
- Lien, waiver, and closeout documentation management

ENVIRONMENTAL

- Pre-feasibility assessment, environmental regulatory constraint analysis
- Environmental health and safety management
- Compliance obligation identification, evaluation and review
- Stormwater management
- Soil erosion and sedimentation control plan
- Wildfire program evaluation

PROJECT MANAGEMENT

- Design basis development
- Owner's construction project oversight/management
- Coordination of engineering services (electrical/civil/mechanical)
- Contractor and vendor pre-qualification
- Racking and structural design coordination
- Procurement support

PERMITTING AND APPROVAL

- Approvals, permits, by-laws, zoning ordinance requirement identification
- Approval/permit constraint analysis
- Approval/permit condition review/analysis
- Cost identification/evaluation

MANAGEMENT CONSULTING

- Multidisciplinary change management
- Engineering change review and alignment with contract expectations and market requirements
- Cost-benefit analysis and risk allocation
- Project schedule monitoring, project controls, and contract supervision
- Assistance for start up and performance tests
- Contract administration and attending meeting

72.5-800 kV HV/EHV Substations

40+ Years of Expertise

Keys for the highest rate of return (ROI): Flawless Design, Construction, Testing & Commissioning, and Preventive & Predictive Maintenance



Air-Insulated Substation

Powersect delivers independent, client-focused AIS engineering to improve safety, reliability, constructability, and project value.



SF₆ Hybrid Substation

Powersect provides independent, client-focused engineering for SF₆ hybrid substations to support compact layouts, space savings, cost efficiency, and reliable project delivery.



SF₆ Gas-Insulated Substation

Powersect provides independent, client-focused engineering for SF₆ GIS substations to enable compact, space-saving, and cost-effective solutions for urban areas while supporting reliable project delivery.

Crimson 350 MW / 1400 MWh Battery Energy Storage Project, California



Naseer Mohiuddin, P.Eng., Managing Director, Powersect Engineering Inc., reviewed the second-largest Crimson BESS project in the US from the preliminary design stage through IFC, conducted site visits, and provided critical comments throughout the design and construction phases, contributing to its successful operation. The Crimson BESS has been in successful service since October 2022.

Data Centers – Mission-Critical Power



CORE SERVICES FOR TIER III/TIER IV DESIGN OBJECTIVES

- **Utility interconnection & MV/HV:** utility interconnection, MV/HV substation design, scalable infrastructure for phased expansion
- **Backup power integration:** UPS (N+1/2N), generator/ATS schemes, transfer strategy, black start considerations
- **Power quality/system studies:** Harmonics, flickers, voltage sags, load flow, short-circuit, arc-flash (IEEE 1584), grounding and mitigation
- **Protection, controls & monitoring:** P&C design, relay settings philosophy, selective coordination, SCADA integration, event capture
- **Testing & commissioning:** FAT/SAT, end-to-end functional testing, energization readiness, preventive/predictive maintenance
- **Lifecycle reliability & maintainability:** condition monitoring, critical spares strategy, maintainability, KPIs to protect availability

A Thousand Points of Light

**Engineering Confidence for Generation, Storage,
Grid Modernization and Data Centers**

40+ Years of Engineering Excellence in Power Infrastructure

What Matters Most

For developers, utilities, data center owners and operators, and asset owners, success depends on more than design completion—it requires sound early decisions, controlled execution risk, and long-term performance. Powersect delivers an owner-focused approach with deep expertise in mission-critical data center power, HV/EHV substations, renewables, and energy storage (BESS/LDES). Our objective is simple: deliver projects that are safe, reliable, buildable, and bankable—aligned with schedule and budget commitments.

Powersect helps bring clean energy to life—delivering renewable and energy-storage projects that are safe, bankable, and built to perform reliably for decades.

We protect what your customers depend on most—designing mission-critical power systems that keep data centers online, resilient, and ready for whatever comes next.

Our clients choose Powersect for the confidence that comes from clear accountability, responsive support, and results they can trust—making us the partner they return to for their most critical projects.

Powersect Engineering Inc. is an authorized
provider of engineering services

WWW.POWERSECT.COM



Certificate of Authorization (C of A) # 100629920