KEENTEL ENGINEERING · TAMPA, FLORIDA

Electrical Power Engineering for the Modern Grid

Interconnection, substations, transmission, power system studies, renewables, data centers, nuclear and NERC compliance — one specialized team

Keentel Engineering is a specialized U.S. electrical power engineering firm serving utilities, independent power producers, developers, EPCs, investors and data center owners. We design, study and help bring into service the infrastructure that connects generation and large loads to the grid.

Our work spans the full life of a project: screening a point of interconnection, preparing the application, designing the substation and transmission line, running the studies that prove the plant will perform, supporting construction and energization, and keeping the facility compliant once it operates.

We are headquartered in Tampa, Florida, with offices in Austin, Sacramento and Baltimore, and we support projects in every major U.S. market: ERCOT, PJM, MISO, SPP, CAISO, NYISO, ISO-NE and the non-ISO West and Southeast.

Company data

Legal entity	**KEENTEL LLC, DBA Keentel Engineering**
SAM UEI	**RRXUVQ2BFXG2**
D-U-N-S	**05-439-1550**
NAICS	**541330 — Engineering Services**
Texas firm	**Licensed Engineering Firm F-29821**
Florida firm	**Registry No. 36853**
Designations	**MBE · SLBE · ERCOT IMRE registered**
Headquarters	**Tampa, FL**

Credentials

NSPE member · IEEE Senior Member · D-U-N-S Registered · BBB Accredited Business A+ · PE licensure across our active markets

Our Eleven Service Lines

01 POI & Grid Interconnection Engineering

02 Substation Engineering & Design

03 EHV / HV / MV Power System Studies

04 Transmission Line Design

05 Utility-Scale Renewable Energy Engineering

06 Owner's Engineer Services

07 NERC O&P Compliance Services

08 Nuclear Power Plant Electrical Engineering

09 Protection & Control Engineering

10 MEP Engineering Services

11 Data Center Power Engineering

WHO WE ARE

Why Clients Choose Keentel

Power systems is all we do

Senior power engineers work directly on each project. Fewer layers mean faster answers and fewer handoffs.

Design and studies together

The studies drive the drawings, so equipment ratings, settings and models stay consistent from concept to record set.

Built for today's grid rules

We work every day with the interconnection reforms, ride-through standards and modeling requirements now reshaping project development.

Answers, not just outputs

Every report states what the results mean for cost, schedule and risk, with assumptions written down so they can be checked.

Senior review on every deliverable

Studies and drawing sets pass a licensed senior review before they reach the client, the utility or the ISO.

National reach, local knowledge

Four U.S. offices and project experience across ERCOT, PJM, MISO, SPP, CAISO and the non-ISO utilities.

Industries We Serve

- **Utilities and transmission owners** — substations, transmission lines, protection and system studies
- **Independent power producers** — solar, wind, battery storage and hybrid plants
- **Data centers and large loads** — load interconnection, campus power and on-site generation
- **Conventional and nuclear generation** — balance-of-plant electrical, grid interface and compliance
- **EPC contractors** — design packages, RFI and construction support
- **Investors and lenders** — technical due diligence and owner's engineer services
- **Industrial and commercial facilities** — power distribution, arc flash and MEP
- **Engineering firms** — specialist power systems support and independent QA/QC

How We Work

1. **Scope** — Define the decision, the inputs and the deliverables before work starts.
2. **Data** — One data request on day one and a tracked gap list.
3. **Engineer** — Design and studies on one consistent basis.
4. **Review** — Senior QA/QC before every issue.
5. **Support** — Utility, ISO and field support through energization.

Markets & Interconnections

ERCOT · PJM · MISO · SPP · CAISO · NYISO · ISO-NE · Non-ISO West · Southeast utilities · Eastern Interconnection · Western Interconnection · Texas Interconnection

Ways to Engage

Fixed fee

Defined scopes such as a study, a drawing package or a compliance assessment, priced as a lump sum.

Time and materials

Evolving scopes and ongoing support, billed against an agreed rate schedule and budget.

Master services agreement

Portfolio and repeat work under one agreement, with individual work orders for each project.

01 POI & Grid Interconnection Engineering

Engineering support from site screening to an executed interconnection agreement, so the point of interconnection, the application and the studies all hold up under utility and ISO review.

SCOPE

- Point of interconnection screening and capacity assessment
- Interconnection request preparation and data packages
- Review of system impact, facilities and cluster study results
- Large load and co-located load interconnection applications
- Transmission owner and ISO coordination through decision points
- Model submittals and material modification evaluations

TYPICAL DELIVERABLES

- POI screening memo
- Application package
- Study review and comment letter
- Upgrade and cost-risk summary

IDEAL FOR Developers and large-load customers entering or managing an interconnection queue

02 Substation Engineering & Design

Collector, switching and transmission substations designed through every issue stage, from 30% concept to record drawings, at 13.8 kV through 500 kV and above.

SCOPE

- Single-line, three-line and AC/DC schematics
- Physical layout, equipment arrangement and bus design
- Grounding grid design and lightning shielding
- Protection, control and metering design
- Control building, conduit, cable and raceway design
- Civil, structural and geotechnical coordination with the engineers of record

TYPICAL DELIVERABLES

- 30/60/90% and IFC drawing sets
- Bill of materials and specifications
- Grounding and shielding reports
- Record (as-built) drawings

IDEAL FOR Utilities, IPPs and EPCs building collector, switching or transmission substations

03 EHV / HV / MV Power System Studies

Steady-state, dynamic and transient studies from 4 kV to 765 kV, with conclusions written for the decision the client needs to make.

SCOPE

- Load flow and contingency analysis
- Short circuit and equipment duty
- Dynamic stability and ride-through
- EMT (electromagnetic transient) studies
- Protective device coordination and arc flash
- Harmonics, power quality, insulation coordination and transformer energization

TYPICAL DELIVERABLES

- Study reports with assumptions and conclusions
- Model files and input data
- Mitigation recommendations

IDEAL FOR Projects that need defensible study results for utilities, ISOs, lenders or owners

04 Transmission Line Design

Overhead transmission and gen-tie lines from route and corridor studies through structure design, conductor selection and the construction drawing package.

SCOPE

- Route, corridor and survey coordination
- Structure selection, loading and spotting
- Conductor, sag-tension and clearance design
- Foundation design coordination
- Reconductoring, rebuild and uprating studies
- Permitting and external interface support

TYPICAL DELIVERABLES

- Plan and profile drawings
- Structure and loading calculations
- Construction drawing package

IDEAL FOR Gen-tie lines, new transmission and reconductoring or uprating of existing lines

05 Utility-Scale Renewable Energy Engineering

Solar PV, wind, battery energy storage and hybrid plants, designed and studied to meet today's interconnection, ride-through and modeling requirements.

SCOPE

- PV array, DC and collection system design
- Wind collection system and substation design
- BESS electrical design and auxiliary power
- Hybrid plant and shared-POI integration
- IEEE 2800 and ride-through compliance
- PSS® E and PSCAD plant model development and validation

TYPICAL DELIVERABLES

- Electrical drawing sets
- Plant models and model quality test results
- Reactive capability and collection studies

IDEAL FOR Solar, wind, storage and hybrid plants from development through operation

06 Owner's Engineer Services

Independent technical representation for owners, developers and investors from development through commissioning and performance testing.

SCOPE

- Design review and technical assurance
- Procurement and factory acceptance testing support
- EPC oversight and milestone review
- Commissioning and energization support
- Performance and capacity testing review
- Technical due diligence for acquisitions and financing

TYPICAL DELIVERABLES

- Design review comment logs
- Site and milestone reports
- Due diligence reports

IDEAL FOR Owners, investors and lenders who need an independent technical voice

07 NERC O&P Compliance Services

Compliance programs for Generator Owners and Operators built on real engineering evidence: settings, models, ratings and studies that hold up at audit.

SCOPE

- Registration and applicability assessment
- PRC-024, PRC-029 and PRC-019 settings evaluations
- MOD-025 and MOD-026 testing and model validation
- FAC-008 facility ratings
- EOP-012 cold weather preparedness
- Audit, spot check and self-report support

TYPICAL DELIVERABLES

- Applicability matrix and gap report
- Technical evidence packages
- Procedures and evidence binders
- PRC-029 R4 hardware-limitation packages

IDEAL FOR Registered Generator Owners and Operators, including newly registered IBR entities

08 Nuclear Power Plant Electrical Engineering

Non-safety-related and balance-of-plant electrical engineering for operating plants, uprates, restarts and new nuclear, including grid interface and offsite power studies.

SCOPE

- Offsite power and degraded voltage studies
- NUC-001 and transmission interface coordination
- Balance-of-plant electrical design
- Switchyard, transformer and auxiliary system studies
- Support for uprates, license renewal and modernization
- SMR and co-located data center load interconnection studies

TYPICAL DELIVERABLES

- Study reports
- Design inputs and calculations
- BOP electrical drawings

IDEAL FOR Operating plants, uprates, restarts and new nuclear projects

09 Protection & Control Engineering

Protection schemes, relay settings and coordination from the generator or load to the utility breaker, plus field support through energization.

SCOPE

- Protection scheme design to IEEE C37 guides
- Relay settings and coordination studies
- IEC 61850 and communications-assisted schemes
- Special protection and remedial action schemes
- Misoperation analysis and event review
- Commissioning witnessing and troubleshooting support

TYPICAL DELIVERABLES

- Settings files and coordination reports
- Protection one-lines and schematics
- Test witness reports

IDEAL FOR New facilities, protection upgrades and plants addressing misoperations or trips

10 MEP Engineering Services

Electrical-led MEP engineering for control buildings, e-houses, battery rooms and commercial facilities, with mechanical and plumbing designed and sealed by licensed specialists we coordinate.

SCOPE

- Power distribution and lighting design
- Control buildings and e-houses
- Battery room and fire system power
- Grounding, bonding and working space
- Arc flash labeling and safety studies
- Mechanical and plumbing coordination

TYPICAL DELIVERABLES

- Electrical drawings and panel schedules
- Load calculations
- Coordinated MEP package

IDEAL FOR Control buildings, e-houses, battery rooms and commercial facilities

11 Data Center Power Engineering

Power for hyperscale, colocation and AI data centers, from large load interconnection through campus substations, MV distribution and on-site generation and storage.

SCOPE

- Large and medium load interconnection applications
- Utility and TSP coordination
- Campus substation and MV distribution design
- Load modeling, ride-through and power quality
- Co-located generation and BESS integration
- Load flow, short circuit, arc flash and coordination studies

TYPICAL DELIVERABLES

- Load interconnection package
- Campus power design
- Study reports and dynamic models

IDEAL FOR Hyperscale, colocation and AI campuses seeking power on a defined schedule

Modeling & Analysis Platforms

Area	Platforms
Transmission planning (RMS)	Siemens PTI PSS® E · GE PSLF · DIgSILENT PowerFactory
Electromagnetic transients (EMT)	PSCAD/EMTDC
Protection and short circuit	ASPEN OneLiner · relay vendor software
Facility studies	ETAP · SKM
Event analysis	DFR, PMU and SCADA data; COMTRADE review

WHO WE WORK WITH

Our Clients

Keentel Engineering serves utilities, independent power producers, developers, EPCs, OEMs and data center owners across the United States.

UTILITIES
Entergy · Arizona Public Service · Austin Energy · Avangrid

GENERATION & OEM
Siemens Energy · Power CAMS · Tenova

RENEWABLE POWER & STORAGE
EDF Power Solutions · AYPA Power · RRC Companies · Miller Bros. Solar · NLine Energy

DATA CENTER & AI
OCTA Data Center · Anthropic · Brasswater

ENGINEERING, EPC & SERVICES
Pike Engineering · Fisher Associates · PAE Engineers · Solvida Design + Engineering · Shermco · Pro-Serv · XUTILITY · Risk Work

Clients & Representative Projects

Client	Sector	Representative projects
EDF Power Solutions	Renewable power	Fox Squirrel Solar · Playa Solar 1 & 2 · Desert Quartzite · Desert Harvest I & II · Arrow Canyon Solar · Big Beau · Maverick Solar 1, 4, 6 & 7 · Valentine Solar · Milagro Solar · Milligan Wind Farm · Pacific Wind · Shiloh Wind II, III & IV
AYPA Power	Battery storage	Bypass BESS · Pediment BESS · Ferdinand Grid BESS · Borden County BESS · CALD BESS · Wolf Tank BESS · Kuna BESS · Vidal BESS
Entergy	Utility	Driver Solar · Searcy Solar Energy Center · Sunflower Solar · Walnut Bend Solar · West Memphis Solar
Avangrid	Utility & renewables	Offshore wind farm, Massachusetts
Miller Bros. Solar	Renewable power	Fighting Jays Solar · Misae Solar I
RRC Companies	Renewable power	Resurgence Solar + BESS
Power CAMS	Generation	Merom Generating Station
Core Grid Partners	Transmission	Nodaway County 345 kV switchyard
Saber Power	EPC	138 kV GIS substation
Solvida Design + Engineering	Engineering	BESS design, studies and PV / MV / substation QA/QC

Client Roster

Entergy · **Arizona Public Service** · **Austin Energy** · **Avangrid** · **Siemens Energy** · **Power CAMS** · **Tenova** · **EDF Power Solutions** · **AYPA Power** · **RRC Companies** · **Miller Bros. Solar** · **NLine Energy** · **OCTA Data Center** · **Anthropic** · **Brasswater** · **Pike Engineering** · **Fisher Associates** · **PAE Engineers** · **Solvida Design + Engineering** · **Shermco** · **Pro-Serv** · **XUTILITY** · **Risk Work** · **Core Grid Partners** · **Saber Power**

Client names shown with permission. Project-related direct references available upon request. Services on listed projects may include electrical design, power system studies or compliance studies, and scope varied by project.

Codes & Standards

NERC Reliability Standards | IEEE 2800 | IEEE 1547 | IEEE 80 | IEEE 1584 | IEEE 519 | IEEE C37 series | IEEE 998 | NESC (IEEE C2) | NEC (NFPA 70) | NFPA 70E | NFPA 855 | UL 9540 / 9540A | ANSI/NETA | ISO and utility interconnection requirements

Quality, Safety & Delivery

- Design basis agreed at kickoff and carried through every stage
- Discipline check and senior PE review before each issue
- Studies re-run as vendor data replaces assumed equipment
- Comment resolution matrix for every review cycle
- Drawing revision control and transmittal logs
- Documented safety program for field work and site visits
- Sealed deliverables by Professional Engineers licensed in the project's state
- Clear scope boundaries with civil, structural and other disciplines

Coverage Across the Project Lifecycle

Phase	How Keentel supports it
Origination & siting	POI screening, capacity assessment, preliminary one-line and fatal-flaw review
Interconnection	Application packages, models, study review, ISO and transmission owner coordination
Design	Substation, transmission, collection, BESS, data center and MEP design through IFC
Procurement & construction	Specifications, submittal review, RFIs, factory testing and owner's engineer oversight
Commissioning	Settings, energization support, test witnessing and model validation
Operations	NERC compliance, event analysis, upgrades, uprates and repowering

Start a Project

Tell us about your site, interconnection or facility — we'll respond with a scope and approach.

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NSPE · D-U-N-S REGISTERED · IEEE SENIOR MEMBER · BBB ACCREDITED BUSINESS A+

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Disclaimer: This capability statement is marketing material, not a proposal; please verify all project information with Keentel before relying on it. Services listed may include electrical design, power system studies or compliance studies related to electrical engineering, and scope varies by project. Civil, structural, geotechnical, mechanical, plumbing and fire protection engineering are performed and sealed by licensed specialists that Keentel coordinates. Nuclear services are non-safety-related unless performed within a licensee's or prime contractor's quality program; Keentel does not hold its own 10 CFR 50 Appendix B program. CIP cyber security is coordinated with the client's own cyber team. Relay acceptance and maintenance testing is performed by accredited testing contractors. Software, standards-body, ISO, utility and client names are the marks of their respective owners; Keentel Engineering is not affiliated with or endorsed by them.

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