

Position Description

Senior Consultant – Energy Storage

E3 Consulting is hiring for a Senior Consultant – Energy Storage position to support its energy storage and renewable energy technical due diligence practice. The Senior Consultant would assume the role as the team lead for E3’s energy storage business, with a focus on battery energy storage along with other energy storage applications.

Background on E3

Founded in 1999, E3 is a leading technical advisor, providing reviews of complex capital-intensive projects for capital providers, project developers, owners, and regulators. E3 primarily provides independent engineering and advisory services for energy, industrial, and public infrastructure projects. E3 operates as an independent subsidiary of NAES, a large provider of O&M and engineering services in the power generation sector.

Why Work with E3 Consulting?

E3 has a culture of teamwork and mutual respect and places high value on work-life balance. We offer a small business feel, while working on interesting and oftentimes cutting-edge projects largely in the energy sector. With the continued energy transition, E3’s renewables business continues to be a focal point of our team.

Summary of Expected Duties

The ideal candidate would, firstly, be a good fit with E3’s culture. The primary focus of the position is to conduct technical due diligence and development support related to standalone and/or integrated (solar, wind or thermal) energy storage projects for the purpose of project financing. The candidate would be familiar with other energy storage associated aspects such as SCADA and grid integration as well as interconnection requirements for storage facilities. The candidate would be expected to be an active participant in business development.

Details of Essential Duties and Responsibilities

Energy Storage Modeling

- Develop and maintain energy storage models using MS Excel, Python, or other relevant software tools (e.g., HOMER)
- Using modeling results, review and scrutinize underlying performance of energy storage projected in financial model
- Apply energy storage knowledge and experience to interpret repowering/refurbishment strategies designed to avoid capacity degradation, including duty cycles, state of charge, discharge rate and other major and minor design attributes
- Review electrical designs of standalone and integrated storage projects for model input purposes
- Review performance test data to verify satisfaction of contractual obligations

Equipment and Design Review

- Review electrical and civil design documents to verify projects are designed according to industry standards
- Confirm major equipment specifications and certifications
- Compare warranty terms and conditions against other projects that utilize similar technologies and advise on project adherence to required operations and maintenance standards necessary for the projected useful life
- Review interconnection documents such as interconnect service agreements, interconnection studies and other interconnection related documents

Site Visits

- Visit project sites to verify construction progress or completion according to specified benchmarks
- Validate as-built construction against energy storage modeling assumptions and applicable contracts and specifications

Production Data Review

- Review data from existing projects to offer opinions as to whether projects are performing as expected
- Investigate and summarize possible causes of energy storage facility underproduction

Business Development

- Help drive new business by attending conferences, contacting and/or visiting clients and developing proposals for projects
- Develop new tools to improve workflows and improve E3's products and services

Preferred Qualifications

- Bachelor's degree in a science-based field such as electrical engineering (desired) with a master's degree in related technical field or MBA (preferred)
- Five to ten years of experience working in a relevant industry
- Experience with energy storage modeling software applications such as Python, HOMER or in-house developed applications
- Direct experience with NiCad, lithium ion, lead acid and flow batteries is highly desirable
- Strong knowledge of equipment fundamentals including inverters, transformers, battery racking systems, control systems/SCADA, metering, fire protection systems and HVAC systems
- Knowledge of energy storage paired with PV solar projects
- Excellent report writing skills
- Strong analytical skills and experience with MS Office, including working expertise with Word and Excel
- The ability to work independently or as part of a team
- Willingness to travel for work (approximately 10-25 percent)