
Lead/Principal Engineer

Renewables Modeling and Studies & Grid Dynamics

About Elevate Energy Consulting

Elevate: to raise, uplift, promote, upgrade, improve, advance, elate

Elevate Energy Consulting was formed to *elevate* clients across the electricity ecosystem as we strive for a reliable, resilient, and affordable clean energy future. With a blend of deep expertise across bulk power system planning, design, control, protection, and operations, we support our clients tackling the most challenging issues facing the energy transition. Our experience and deep regulatory background in North America also enable us to support clients to ensure compliance with existing and future obligations.

We work on diverse projects to help *elevate* our clients across a broad spectrum of reliability-centered topics – modeling, studies, protection settings, event analysis, optimization, systems integration, process improvements, internal controls, compliance evidence, etc. Our goal is to *uplift* and *elevate* our clients and to ensure that our work has positive impact for the betterment of our industry and society. Join our rapidly growing team to tackle imminent challenges facing the grid of the future.

Position Summary

As an early stage startup with big plans to have a significant positive impact on the electricity sector, this role will play a key part in helping the organization tackle exciting projects related to studying the reliability impacts of a world dominated by inverter-based resources (IBRs), such as solar, wind, and energy storage resources. Projects will lead large modeling and studies projects related to developing IBR models and conducting model quality checks; conducting detailed powerflow, dynamics, short-circuit, and electromagnetic transient (EMT) studies; interfacing with clients to support modeling and studies projects; and provide technical guidance, oversight, and coaching to team members. This is a unique and rare opportunity to join highly technical industry leaders with a clear mission and vision.

Roles and Responsibilities

This lead/principal engineer role will be responsible for serving as a subject matter expert on power system modeling and studies, inverter-based resource modeling and study work, and a range of other engineering projects to support renewables integration and analyses. The role will involve technical modeling and study work as well as overseeing larger high-priority projects and providing coaching to other team members.

The following are a list of roles, responsibilities, and projects related to this position:

- Lead and conduct power system studies (powerflow, dynamics, EMT, and short-circuit) to analyze the reliability of interconnecting IBRs to the bulk power system.
- Lead and execute the development of power system models of IBRs and conduct model quality checks; test those models in interconnecting systems.

-
- Drive the development and use of advanced automation scripts and tools in-house to effectively conduct reliability studies at-scale, and help build systems and tools to drive business efficiencies in this area.
 - Interface with clients on specific projects to support the enhancement of tools, processes, requirements, and understanding of the changing resource mix, grid transformation, and the energy transition.
 - Provide subject matter expertise internally and to transmission service providers, transmission planners, system operators, renewable energy project developers, generator owners and operators, and regulatory entities across North America.
 - Lead and conduct transmission planning reliability studies to support transmission planners and utilities in studying future scenarios and grid reliability impacts of a changing resource mix. These could include local reliability studies, regional studies, interregional studies, or even Interconnection-wide studies.
 - Leverage first principles, engineering fundamentals, and microcosm systems to help drive best practices around emerging reliability risk areas and other topics of interest.
 - Study the changing resource mix and its impacts on bulk power system reliability including areas involving low system strength conditions, grid forming inverter technology, impacts to protection and control systems, frequency response, voltage stability, control interactions, and subsynchronous oscillations.
 - Lead the development of modeling and study reports and documentation to successfully accomplish and complete project deliverable requirements.
 - Deliver technical presentations to clients and broadly across industry to help *elevate* industry best practices; be and continue to grow as a leader across the electricity industry overall.
 - Successfully deliver exceptional value to clients through world-class analysis and the delivery of key milestones and deliverables.
 - Serve as an industry leader and establish relationships with other industry thought leaders, executives, policymakers, and others.
 - Meet with clients (virtual and in-person as needed) to understand needs; successfully communicate with clients both verbally and in writing.

Qualifications

Candidates should have the following **required** qualifications:

- A Master's degree in electrical engineering with a specialization in power systems engineering (or closely related field) from an accredited four-year college or university.
- Specialized experience focused on grid reliability, inverter-based resources, renewable energy interconnections, modeling, power system studies, protection and control systems, etc.
- Deep technical understanding of power system dynamics, controls, protection, operations, and planning areas.
- At least 10 years of deep technical experience in renewable energy resource and power system modeling and planning areas.

-
- Extensive expertise conducting powerflow, dynamics, short-circuit, and EMT simulations, including the modeling and representation of renewable energy resources.
 - Extensive expertise conducting large-scale reliability studies on a regional or Interconnection-wide basis.
 - Experience with inverter control and protection systems and how to model and represent these devices in power system studies.
 - Extensive experience using multiple power system analysis tools such as PSS/E, PSLF, PSCAD, and ASPEN; strong automation and programming skills such as using Python.
 - Excellent communications skills including both written and verbal communication, and examples of successfully leveraging these skills across the industry.
 - Strong interpersonal skills, compelling presentation skills, and the ability to establish strategic relationships.
 - A highly-motivated self-starter and driven individual with the ability to work independently and in the face of uncertainty.

Physical requirements for this role include:

- Must be able to sit and/or stand for prolonged periods of time at a computer.
- Ability to travel to job sites, both in an office environment and in the field.

Additional Details

- The final title for this role will be determined based on the qualifications of the candidate and on performance through the interview process.
- A background check will be conducted prior to employment.
- All persons hired will be required to verify identity and eligibility to work in the United States and must complete employment eligibility verification documentation upon hire, in compliance with federal law.
- This is a fully remote role with some travel expected; a passport is required for North American and other international travel.
- This position has been classified as exempt.

To apply for this role, please send a resume and cover letter to careers@elevate.energy.

Elevate Energy Consulting is an equal opportunity employer committed to diversity and inclusivity in the workplace. We prohibit discrimination and harassment of any kind based on race, color, sex, religion, sexual orientation, national origin, disability, genetic information, pregnancy, or any other protected characteristic as outlined by federal, state, or local laws. Elevate Energy Consulting makes hiring decisions based solely on qualifications, merit, and business needs at the time.