

**Position:** Senior Instrumentation, Electrical and Controls Engineer

**Location:** Danbury, CT

We are currently seeking a highly motivated, forward-thinking energy technology enthusiast to join the Instrumentation, Electrical, and Controls Engineering group where you will be responsible for designing, evaluating and supporting our proprietary equipment for power generation, conversion, and storage.

**Responsibilities:**

- Develop control and protection strategies for fuel cell operational processes, documenting them in written philosophy documents.
- Model dynamic physical processes (flow, heat transfer, chemical reactions) to facilitate control strategy design and control loop tuning by predicting system responses
- Specify and select final control elements (flow control valves, actuators, variable speed drives, etc.)
- Define functional requirements, create statements of work, and prepare requests for quote and all associated documentation as required
- Specify and select process sensors and instruments (flow, temperature, pressure, level, etc.)
- Author and support execution of test plans to validate design work at component and system levels
- Participate in process operation hazard studies (HAZOP) and/or lead level of protection analyses (LOPA) and implement necessary recommendations to ensure process operation safety and equipment protection
- Engage with and support process, equipment, and electrical engineering disciplines in their design efforts, ensuring process control needs are considered
- Supports troubleshooting and resolution of I&C-related Field Issues including the performing root cause analysis;
- Create specifications and drawings (schematics, loop sheets, panel drawings, etc) for PLC and relay logic control systems using Engineering Change and configuration control processes ;
- Maintains and controls all Fuel cell related Control Systems software;
- Stay current with the state of the art in process control hardware and software
- Work on-call (rotation) as required
- Performs other duties as assigned.

**Qualifications:**

**Education / Experience:** B.S. in Electrical, Chemical, Electronics Engineering (or a related BS with applicable experience) required. M.S. or a Control Systems PE preferred. 7+ years commercial controls systems experience required; direct experience in FCE fuel cell technology may also be considered.

### **Required Knowledge skills and Abilities:**

- Experience applying instrumentation and controls engineering principles to design integrated systems.
- Demonstrated testing, validation, product launch, support, and continuous improvement experience.
- Statistical knowledge (e.g Six Sigma, DoE, Weibull) & experience.
- Electrical drawings and documentation (e.g. Single Line, Three Line, Wiring & Interconnect Drawings)
- Electrical Layouts & Details, Power Distribution Drawings
- Familiar with Instrument Layout & Details, Logic Diagrams, Instrument Loop Diagrams
- Capable of independently managing tasks and schedules commitments
- Proficient in Microsoft Office (Word, Excel, PowerPoint)
- Troubleshooting & Root cause investigation experience
- HAZOP, FMEA, DFSS, electrochemistry experience are all pluses
- Excellent verbal and written communication skills coupled with strong people orientation and relationship building skills
- Strong aptitude and desire to learn fuel cell control systems.
- Ability to work in a team environment including Engineers, Operators and Technicians.
- Ability to use electrical meters such as multi-meters.
- Special knowledge: Ladder logic and Function Block Programming.
- Possesses understanding of Instrumentation and Actuators;
- Possesses understanding of the speed of actuators and their effect on process system performance; and devising controls software to facilitate system performance requirement; E.g. Background in performing dynamic system stability calculations
- Experience with PLCs, Human Machine Interface (HMI). Must have working knowledge of how these devices function and communicate to control processes. Must be able to program and configure these devices.
- Experience with GE PLC software development, particularly GE Proficy Logic Developer and View.
- Demonstrated project experience developing controls algorithms, producing code, selecting and tuning final control elements and sensors, documenting work
- Ability to thrive in an environment where the principles of honesty, integrity, humility, curiosity, diligence, conscientiousness, and self-improvement persist.

### **Work Environment / Physical Requirements:**

- Must be able to work physically in the office environment, lab environment and in the field, wearing required personal protective equipment as designated.
- Lifting up to 25 lbs., utilizing both hands simultaneously, utilizing hand tools, test equipment.
- Walking/standing/working in an office, lab, fabrication area, or designated construction site environment.
- Other physical requirements (pushing, pulling, and bending) may be required to perform inspections, make connections, take photographs, or access installed equipment. Able to climb a ladder.
- Ability to remain on feet and move from area to area for a period of up to eight (8) hours with standard breaks.
- Travel: 10% domestic or international
- Have or be able to obtain a Passport

### **How to Apply:**

Submit a copy of your resume, along with the voluntary self-identification forms, to **jobs@fce.com**. Please reference the Position (Job Title) in the subject header of your email.

Please note only those authorized to work in the United States will be considered.

*No agency submissions, please. Resumes submitted to any FuelCell Energy employee without a current, signed and valid contract in place with the FuelCell Energy Recruiting team for this position will become the property of FuelCell Energy and no agency fees will be paid.*

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### **Equal Opportunity Employer - Vet/Disability**

We offer a competitive compensation package as well as comprehensive benefits including medical, dental, vision, company-paid life/disability insurance, 401(k) plan, employee stock purchase plan and generous paid leave.

Employment with FCE is subject to pre-employment drug-screen and background investigation.

FuelCell Energy, Inc. is committed to ensuring that its application process provides an equal employment opportunity to all U.S. job seekers, including individuals with disabilities. If you believe you need a reasonable accommodation in order to search for a job opening or to submit an application, please send an email with your resume to **jobs@fce.com** indicating the specifics of the assistance needed.

You may also use **203-205-2070**, a phone line designed **exclusively** to assist disabled job seekers whose disability prevents them from being able to apply online. Only messages left for this purpose will be acknowledged. A response to your request may take up to two business days.