Job ID: 2020-34

**Position:** Senior Instrumentation and Controls Engineer  

**Location:** Danbury, CT

**About Our Company:**
FuelCell Energy, Inc. (NASDAQ: FCEL) is a global leader in developing environmentally responsible distributed baseload power solutions through our proprietary fuel cell technology. We develop turn-key distributed power generation solutions and operate and provide comprehensive services for the life of the power plant. We are working to expand the proprietary technologies that we have developed over the past five decades into new products, markets and geographies. Our mission and purpose remains to utilize our proprietary, state-of-the-art fuel cell power plants to reduce the global environmental footprint of baseload power generation by providing environmentally responsible solutions for reliable electrical power, hot water, steam, chilling, hydrogen, microgrid applications, and carbon capture and, in so doing, drive demand for our products and services, thus realizing positive stockholder returns. Our fuel cell solution is a clean, efficient alternative to traditional combustion-based power generation and is complementary to an energy mix consisting of intermittent sources of energy, such as solar and wind turbines. Our systems answer the needs of diverse customers across several markets, including utility companies, municipalities, universities, hospitals, government entities and a variety of industrial and commercial enterprises. We provide solutions for various applications, including utility-scale distributed generation, on-site power generation and combined heat and power, with the differentiating ability to do so utilizing multiple sources of fuel including natural gas, Renewable Biogas (i.e., landfill gas, anaerobic digester gas), propane and various blends of such fuels. Our multi-fuel source capability is significantly enhanced by our proprietary gas-clean-up skid.

**Overview:**
We are currently seeking a highly motivated Senior Instrumentation and Controls Engineer to join the multi-disciplinary Advanced Technology team responsible for designing advanced fuel cell-based systems for both power generation and carbon capture applications.

**Responsibilities:**
The Senior Instrumentation and Controls Engineer will be responsible for control system design and programming, and system operational support including troubleshooting and data analysis. This position requires flexibility to work on multiple projects, covering a range of systems and technologies, in various stages of the design or validation process.

- Develop control and protection strategies for fuel cell operational processes, documenting them in written philosophy documents.
- Program and configure PLCs and HMI’s.
- Provide system and test stand operational support.
- 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.
Domestic and occasional International travel required: 15%

Qualifications:
Education: BS/MS in Electrical Engineering or Chemical Engineering. In the absence of a degree, 10+ years of relevant work experience is required.
Experience: MS: 3-5 years of relevant industrial experience, BS: 5-7 years of relevant industrial experience, No Degree: 10+ years of relevant industrial experience.

Required Experience and Characteristics:
- Experience applying instrumentation and controls engineering principles to design integrated systems.
- Experience in ladder logic and function block programming.
- 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.
- Demonstrated testing, validation, product launch, support, and continuous improvement experience.
- Familiar with Instrument Layout & Details, Logic Diagrams, Instrument Loop Diagrams
- Troubleshooting & Root cause investigation experience
- Electrical drawings and documentation (e.g. Single Line, Three Line, Wiring & Interconnect Drawings)
- Electrical Layouts & Details, Power Distribution Drawings
- HAZOP, FMEA, DFSS, electrochemistry experience desired.
- Ability to use electrical meters such as multi-meters.
- Possesses understanding of Instrumentation and Actuators.
- 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
- Proficient in the use of Microsoft Office Suite.
- Excellent oral and written communication skills to work effectively and openly with others, both internally and externally.
- Good presentation skills to effectively communicate ideas and scientific findings.
- Team player who works willingly with others and keeps a positive, goal-focused outlook when tackling challenging, time-sensitive engineering problems.
- Flexible and adaptable to rapidly shift gears into multi-disciplinary roles based on current project requirements.
- Ability to obtain/maintain a valid passport and travel internationally without restriction is required.

Working Environment/Working Conditions:
- Desk work using a computer.
- This position is located indoors and requires the ability to move between separated rooms within the same building.
- Periodic travel via car and/or commercial airlines.
- Periodic work outdoors in a power plant environment during commissioning activities.

How to Apply - Current Employees Only:
Please submit your resume, to jobs@fce.com and reference the Position (Job Title) in the subject header of your email.

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 or contact us by calling 203-205-2070. Please indicate the specifics of the
assistance needed.

**NOTE:** This dedicated phone line is designed **exclusively** to assist disabled job seekers whose disability prevents them from emailing. Only messages left for this purpose will be acknowledged. A response to your request may take up to two business days.

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.