**Title:** Electrical & Systems Integration Engineer  
**Status:** Exempt

**Summary:**

To be an integral part of a team dedicated to the design, fabrication and optimization of small scale Solid Oxide Fuel Cell (SOFC) units. Responsibilities include the design and integration of the SOFC system components surrounding the fuel cell stack. Areas of expertise require design, sourcing, fabrication, integration, and testing of; electronic controls, mechanical components, insulation, packaging, enclosures, etc. to support the product specifications of a SOFC system.

**Responsibilities:**

* Expertise with the design of fuel cell systems is preferred.
* Expertise in electromechanical systems design.
* Expertise in electromechanical systems integration and testing.
* Expertise is system endurance and environmental testing is desirable.
* Expertise in material science.
* Experience in heat transfer and thermal distribution through materials.
* Experience in electronic design, fabrication, and product integration is a plus.
* Experience in UL product listing and testing.
* Experience in SolidWorks modeling program.
* Experience in Microsoft Office package (incl. Word, Excel, PowerPoint).
* Ability to operate in a small team with a minimum of supervision.
* Participates in weekly planning discussions in regard to status of work in progress.
* Generate regular progress reports and collate relevant advances in field.
* Keeps supervisor informed on a regular basis on development status.
* Complies with State and Federal health, safety, fire and environmental policies.
* Insures that good housekeeping practices are complied within the working area.
* Actively participates in safety awareness and Incident Investigations as assigned.
* Works overtime as required.

**Skills/Qualifications:**

* Bachelors in Science – with one of the following degrees: Mechanical Engineering, Electrical Engineering, and relevant experience.

**Additional Capabilities to Consider:**

* Mechanical Design, Packaging, And Enclosure Design
  + System Packaging Layout And Design
  + Sheet Metal Part Design
  + ABS / Injection Molded Part Design
  + Heat-Sink Design
  + Finite Element Analysis - ( TPRL Resource )
  + Thermal Analysis
* PCB Layout And Design
  + Single-Sided, Multi-layer Designs
  + Surface-Mount, Through-Hole, Mixed Technology
  + Materials And Process Recommendations
  + Panel / Array Design
  + Product Safety Considerations
  + Creepage, Clearance, And Spacing Analysis
  + RF And EMC
  + Considerations
* Analog Circuit Design
  + Logic Function Implementation
  + Sensor Design And Specification
  + Signal Conditioning
  + Active Filter Design
  + EMC Considerations
  + Circuit Simulation And Analysis
* Digital / Microcontroller Circuit Design
  + Algorithm Development
  + Microcontroller Implementations
  + Firmware Development
  + Data Acquisition
  + Digital Filter Design
  + Circuit Simulation and Analysis
* Communications, Embedded Network Design
  + Serial, Parallel, And PC Bus Interface Design
  + RF, Audio, And Power Line Communications Design
  + Embedded Internet Connectivity
* Power Electronics Design
  + Power Supply Design
  + AC And DC Solid State Switching Design
  + Thermal Considerations
  + Circuit Isolation Considerations
* Motor Control Design
  + Wire / Cable Assembly Design
  + Connector / Interconnect Component Specification
* Component Engineering Services
  + Component Specification And Review
  + Component Replacement / Obsolescence Design
* Design Review And Evaluation Services
* Design Evaluation And Stability Analysis
  + Design For Manufacturability Review
  + Design For Testability Review
  + Design For Product Safety Compliance Review
  + Design For EMC Compliance Review
  + Reliability Assessment - HALT Testing
  + Design Validation Testing
* Project Management Services
  + Design Specification Development
  + Product Safety Submittals
  + EMC Compliance Testing Submittals
  + Design Documentation Change Control
  + Management Of IP Interest
  + Project Cost Estimation, NRE Estimation
  + Project Schedule Estimation And Maintenance
* Concept Feasibility Analysis Services
  + Technology Assessment And Selection
  + Algorithm Development And Evaluation
  + Custom System Architecture Selection And Design
* Manufacturing / Quality Control Process Evaluation
  + Functional Test Fixture Development
  + Trouble Shooting - Failure Analysis
  + Manufacturing Process Review
  + Quality Control Process Review

Email [careers@wattfuelcell.com](mailto:careers@wattfuelcell.com) or contact 724.547.9170 to apply for this position.