

Senior Automotive Electrical Engineer – Arcola Energy



Job Description

Use a Systems Engineering approach to design electrical elements of Hydrogen Fuel Cell vehicles: from Requirements Capture, through Concept Design, Detailed Design, Test and Validation and supporting vehicle approval.

Working within Arcola's Engineering team to develop systems focused on heavy duty commercial vehicles – trucks and buses, including electrical energy storage (battery systems), power electronics, electric drive systems, HV and LV distribution.

Outline

- Requirements capture of High Voltage subsystem based on duty cycle data, simulation and modelling.
- Component selection of battery systems, motors, power electronics, power distribution units.
- Requirements capture and component selection of Low Voltage components – instrumentation and actuators.
- Working with control system engineers to specify controllers (ECUs), assign input/outputs and establish interface matrices between controllers and devices.
- Specification and design of wiring harnesses.
- Capturing functional, safety and compliance requirements of electrical components and subsystems
- Hands on work assembling and testing prototype systems
- Contribution to DFMEAs
- Develop and implement test plan (DVP).
- Work with Mechanical and Software teams to support effective whole system design
- Work with Quality and Compliance Manager to ensure designs meet codes, standards and regulations.
- Supporting other Arcola Energy activities where required.

Person Specification

- Good degree in Electrical Engineering or other related engineering discipline.
- Experienced in using software for electrical system design (e.g. Arcadia/Solidworks Electrical/ AutoCAD Electrical)
- Experienced in development of DVPs and FMEAs.
- Experienced in development and undertaking of HIL tests to prove designs.
- Experience designing systems up to 800V
- Experience designing to Reg100 and vehicle approval routes (IVA and/or NSSTA/ECWVTA)
- Experience implementing or supporting Functional Safety in vehicles.
- Working knowledge of CANbus communication protocol (preferably J1939)
- Preferably: hands-on experience working with systems up to 800V
- Willingness to work cross-functionally in the Arcola team.

Terms and Conditions

Salary:	£35-45k dependent on experience
Hours:	40 hrs/week. 9.30am-6pm Monday to Friday with half-hour lunch break. Occasional evening and weekend working (TOIL system in operation)
Holidays:	28 days annual leave, including public holidays
Probation period:	3 months
Access:	Arcola Energy is wheelchair accessible throughout
Benefits:	Free tickets to Arcola Theatre shows (subject to availability) Arcola staff discount on food and drink in café/bar