

Electrical Systems Engineer – Ballard Motive Solutions Ltd.

Ballard Motive Solutions is a leader in hydrogen and fuel cell integration – supplying complete powertrain systems that decrease complexity and development time for fuel cell electric vehicles, increase production volumes and lower cost and time-to-market. We work with some of the most progressive authorities, fleet operators and OEMs to meet their zero-emission targets.

Position: Electrical Systems Engineer

Reports to: Lead Systems Engineer

Location: Flexible

Job Description

Using 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 Ballard Motive Solutions' 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.

Principle Accountabilities and Tasks

- 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
- Capturing functional, safety and compliance requirements of electrical components and subsystems
- Hands on work assembling and testing prototype systems
- Contribution to DFMEAs
- Work with Mechanical, Electrical Distribution System and Control Software teams to support effective whole system design
- Work with the Compliance Team to ensure designs meet appropriate codes, standards and regulations
- Supporting other Ballard Motive Solutions activities where required

Skills and Experience

- 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
- 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)
- Preferable hands-on experience working with systems up to 800V
- Willingness to work cross-functionally in the Ballard Motive Solutions team

What you'll receive in return:

- Competitive salary, based on experience
- Support towards CEng accreditation and your membership fees paid for IET/IMechE
- Flexible work arrangements
- An opportunity to directly impact projects – from concept through to production

About Ballard Motive Solutions:

Ballard Motive Solutions delivers solutions that significantly improve environmental performance compared to incumbent technologies, contributing to the development of cleaner, greener, more secure, more democratic energy and transport systems, enabling healthier living for everyone. We are committed to fostering a diverse work environment and are proud to be an equal opportunity employer. As we highly value diversity in our current and future team, we do not discriminate based on race, religion, colour, national origin, gender or gender expression, sexual orientation, age, marital status, disability or any other characteristic protected by law.

To apply, email: jobs@arcolaenergy.com