Powertrain Systems Engineer – Arcola Energy Ltd.

Arcola Energy is one of the fastest growing hydrogen technology companies in the UK, working with some of the most progressive local authorities, fleet operators and OEMs to meet their zero-emission targets. Arcola has more than 10-years of experience in delivering solutions that address the deployment gap between rapidly evolving low-carbon technologies and production-ready solutions.

Position: Powertrain Systems Engineer
Reports to: Senior Systems Engineer
Location: Scotland/flexible - the job holder will support programmes in Dundee (Scotland), England and Europe as well as other international opportunities.
Arcola Energy are currently working from home.

Job Description

Arcola Energy have developed a Matlab/Simulink based model that is used to simulate different hydrogen fuel cell electric drivetrain architectures under different duty cycles. The role is focused on the development of this model and its application to support the design and development of new vehicle systems.

You will be part of the Systems Engineering team and work with the Control, Test and Development, Mechanical, Electrical and Thermal teams, playing a crucial role in validating component selection, architecture design and control strategy. You will have interactions with external stakeholders (customers, suppliers, vehicle operators, external test facilities).

The position is based from home with site visits to Arcola facilities in Scotland, London and customer sites/test facilities as required

Primary responsibilities:

- Working with Arcola's computational powertrain model
- Development of the model to improve range of vehicle and system architectures that can be covered
- Development of component models to add to model (battery systems, motors, fuel cell modules, power electronics)
- Review and improve the accuracy of the model through validation, working with the Test and Development team
- Analysis of simulation data to inform system architecture decisions, validation of component selections against performance requirements
- Analysis of hydrogen fuel consumption under different operating conditions
- Development and optimisation of drivetrain control strategies in simulation
- Work with the Control Systems team to align/validate model-based control
- Streamline the duty-cycle capture process working with the software team responsible for data acquisition and remote monitoring systems
- Develop and improve the usability of the model
- Supporting other Arcola Energy activities where required.

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Experience and competencies:

- Engineering degree

- Experience using Matlab/Simulink to develop computational models of real-world systems
- Experience with Software in the Loop and Hardware in the Loop testing
- A good understanding of electric vehicle architectures and how to characterise components such as batteries, motors, power electronics
- Good data presentation skills (reporting and documentation)
- Excellent attention to detail
- Excellent communication skills
- Willingness to work cross-functionally in the Arcola 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 – we are currently working from home
- An opportunity to directly impact projects – from concept through to production
- Free tickets to the Arcola Theatre (subject to availability), and Arcola staff discount on food and drink in café/bar.

About Arcola:
Arcola Energy is a privately owned company and offers a truly independent view of one of the fastest growing industries that will lead the road to zero emissions. Our independence also allows us to focus on what we believe in – products which make a positive contribution to society, delivered with total commitment to quality, safety and compliance.

We deliver 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.

Arcola Energy is committed to fostering a diverse work environment and proud to be an equal opportunity employer. As we highly value diversity in our current and future team, we do not discriminate on the basis of 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