

## Founding Engineer - Newlight

We seek an experienced and detail-oriented Embedded Controls Engineer to design, develop, and optimize control systems for our hydrogen injection system. The ideal candidate will collaborate with cross-functional teams to ensure seamless integration and superior performance of our systems

Newlight's mission is to accelerate the maritime industry's transition to sustainable energy by making sustainable shipping affordable and focusing on the current fleet with hydrogen integration. Newlight develops a plugin for ships that reduces fuel consumption and emissions by injecting hydrogen as a dual fuel for existing engines.

### Requirements we seek:

- Bachelor's degree in Mechanical / Electrical Engineering, Control Systems Engineering, Embedded Control Systems, or a related field.
- **5+ years** of experience in designing and implementing **control systems**.
- Experience with **MATLAB/Simulink** for model-based design and control algorithm development.
- Knowledge of **Embedded Coder** for auto-code generation
- Strong understanding of **control theory**, automation protocols, and system integration.
- Understanding **microcontrollers** and **ECUs**, including I/O configurations, memory constraints, and processor architectures.
- Hands-on experience with **CAN (including J1939)**, LIN, FlexRay, and Ethernet for inter-device communication.
- Expertise in using **flashing tools**, debugging firmware, and resolving hardware-software integration issues.
- Background in Internal Combustion engine development.
- Ability to configure and debug communication between the ECU and other components.
- Familiarity with real-time operating systems (RTOS) and hardware interfaces (e.g., UART, SPI, I2C).
- Proficiency with calibration and tuning tools to adjust ECU behavior in real-time.
- Excellent problem-solving skills and attention to detail.
- Strong verbal and written communication skills.
- Ability to manage multiple projects and work effectively in a team environment.

- This role requires **on-site presence** to facilitate rapid iteration cycles in collaboration with the combustion engineer.

### **What You Will Be Doing:**

- Design and implement control algorithms using **MATLAB/Simulink**.
- Generate production-grade C code with **Embedded Coder**.
- Configure and integrate ECUs with sensors and actuators.
- Debug communication via **CAN J1939**, LIN, FlexRay, and Ethernet.
- Flash control logic onto ECUs using tools like MotoTune or RaceCon.
- Fine-tune ECU parameters in real-time with **ETAS INCA** or **CANape**.
- Simulate and test control systems to ensure safety and performance.
- Optimize ECU functionality and resolve firmware issues.
- Work with combustion engineers to integrate control systems.
- Prepare documentation and reports on development and testing.
- Manage multiple projects and meet deadlines.
- Stay updated on ECU technologies and best practices

### **Ways To Stand Out:**

- Familiarity with 2,4-stroke diesel engines.
- Strong embedded systems background, particularly in the maritime or automotive sectors.
- Expertise in hydrogen technology and hybrid systems.
- Passion for environmental sustainability and a deep commitment to Newlight's mission of maritime decarbonization.
- Knowledge in working with LabVIEW/ CANape, MATLAB/ Simulink, ETAS INCA and Embedded Systems, and CAN Protocol.

### **Why Join Newlight?**

- Opportunity to be a big part of Newlight's mission to accelerate the maritime industry's transition to affordable, sustainable shipping with hydrogen integration.
- Opportunity to lead technological innovation in a cutting-edge field.  
Join a skilled and passionate team committed to positively impacting the environment.

- A collaborative and dynamic work environment offers abundant professional growth opportunities, including potential advancement to team leader and technology leader roles.

**To Apply:**

Please send your resume and a cover letter outlining your qualifications and interest in the position to [Recruiting@newlight.blue](mailto:Recruiting@newlight.blue).