

Drivetrain Engineer

- Innovative wave energy developer
- Permanent role based in Fremantle
- Work across a multi-disciplinary team

Carnegie Clean Energy Limited is a renewable energy technology company, focused on developing its world leading patented CETO wave energy technology. The global potential for marine renewable energy is enormous and Carnegie is well positioned to capitalise upon this. Carnegie is working to significantly improve the CETO design through the electrification of the power-take-off system and enhancement of the associated rotary translation system, which converts the linear motion of the buoy into rotary motion suitable for an electrical generator.

Carnegie is seeking a Drivetrain Engineer to join the technical team and work closely with other engineers across a broad range of disciplines in executing the technology development plan. Reporting to Carnegie's Chief Technology Officer, this position will be responsible for providing technical expertise and knowhow to the simulation, sizing, specification, procurement and operation of rotating drivetrains applied to the CETO power-take-off, including advanced electrical generators, mechanical drivetrain components, and system integration. In-depth knowledge of relevant electro-mechanical engineering principles in the design of rotating drivetrains will be required, alongside a thorough understanding of the associated electrical systems, mechanical design and integration of such machines into an overall power generation system.

The Position:

- Deliver electro-mechanical engineering expertise for the design and specification of rotating electrical machines, mechanical drivetrains, and associated electro-mechanical systems
- Develop computer models and undertake simulations to evaluate the behaviour and performance of the drivetrain stand-alone, and integrated with overall system models
- Contribute to the overall CETO design through integration of rotating electrical machine solution, including management of mechanical integration design
- Assess performance of various rotating electrical machine options to validate design selections, and optimise overall CETO performance
- Provide costing knowledge in preparation of budget estimates for CETO devices, focused on power-take-off, and drivetrain details

- Manage relationships with rotating electrical machine suppliers and mechanical drivetrain component suppliers, to deliver optimal technical and commercial outcomes from procurement activities
- Deliver electro-mechanical engineering expertise in the design of wider power generation electrical and mechanical systems, including electrical & mechanical energy storage, power electronics, grid connection, and heavy-duty mechanical componentry.

The Candidate will possess the following:

- A positive and collaborative approach to problem solving in a team environment
- Bachelor of engineering or higher in Electrical or Mechanical Engineering - Masters level focussing on electro-mechanical engineering preferred. B.Eng plus relevant industrial experience will be considered
- 5+ years' experience in electro-mechanical engineering in power generation, heavy industry or propulsion applications

The following would be well regarded:

- Experience in electric vehicle drivetrain design
- Experience in marine applications such as marine propulsion or marine energy, especially electric propulsion
- Experience in wind energy drivetrain applications, especially direct drive
- Experience with large scale rotating electrical machines in other industries will be considered where candidate can demonstrate applicability, including heavy-duty drives for industrial process
- Experience with electrical or mechanical energy storage technologies
- Background in wider electrical generation system design (i.e. grid connection systems)
- Background in heavy-duty mechanical engineering for rotating equipment

The Company offers:

- The chance to work in a rewarding company and be part of developing and demonstrating a world class and world first renewable energy technology
- A competitive remuneration package will be offered in line with relevant experience and skills

Applications, including covering letter, CV and answers to the application questions below, should be forwarded to careers@carnegiece.com in PDF format with "Drivetrain Engineer" in the subject title. Only shortlisted applicants will be contacted. Confidentiality is assured.

Application Questions

Are you eligible to work in Australia?

How many years experience do you have in a similar role?

What is your expected salary?

Do you have a relevant degree or tertiary qualification?

Describe your ideal work environment in 3 words.