

Electrical Machine Expert

- 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 Electrical Machine Expert 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 the 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 advanced rotating electrical machines applied to the CETO power-take-off. In-depth knowledge of relevant electrical engineering principles in the design of electrical machines will be required, alongside a thorough understanding of the associated power electronics, mechanical design and integration of such machines into an overall power generation drivetrain.

The Position:

- Deliver electrical engineering expertise for the design and specification of rotating electrical machines and associated electronics
- Develop computer models and undertake simulations to evaluate the behaviour and performance of the sub-system stand-alone and integrated with overall system models
- Contribute to the overall CETO design through integration of 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

- Manage relationships with electrical machine suppliers, to deliver optimal technical and commercial outcomes from procurement activities
- Deliver electrical engineering expertise in the design of wider power generation electrical systems, including electrical energy storage, power electronics, and grid connection

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 Engineering - Masters level focussing on rotating electrical machines preferred. B.Eng plus relevant industrial experience will be considered
- Mechanical Engineering qualifications will be considered where significant industrial experience in the rotating electrical machine context is present
- 5+ years' experience in rotating electrical machine engineering in power generation applications

The following would be well regarded:

- Experience in electric vehicle drive-train design
- Experience in marine applications such as electric marine propulsion or marine energy
- Experience in direct drive wind energy applications
- Experience with large scale electrical machines in other industries will be considered where candidate can demonstrate applicability
- Experience with electrical energy storage technologies
- Background in wider electrical generation system design (i.e. grid connection systems)

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 "Electrical Machine Expert" 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.