

Drivetrain Engineer

- Join an innovative renewable energy technology developer.
- Work across a multi-disciplinary team.
- Contribute to leading wave energy development with EuropeWave program.

CETO Wave Energy Ireland (CWEI) is the Irish subsidiary of Australian based Carnegie Clean Energy, 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 CWEI is well positioned to capitalise upon this. CWEI has recently been awarded a contract to deliver Phase 3 of the €20m [EuropeWave Pre-Commercial Procurement \(PCP\) Programme](#), a competitive programme to advance wave energy. EuropeWave PCP's objective is to accelerate the development of cost-effective wave energy converter systems that can survive in the harsh ocean environment.

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 particular the Drive train engineer will be the work package manager for the PTO system to be delivered for the EuropeWave project. 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, power electronics, 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.
- Represent CWEI on various European forums and promote the ACHIEVE project.
- Contribute to project reports and deliverables writing.
- Undertake design, analysis and development activities of components within the CETO technology where required.
- Position primarily based in Bilbao (Spain) with regular travel to visit stakeholders across Europe.

The Candidate will possess the following:

- A positive and collaborative approach to problem solving in a team environment.
- Bachelor of engineering or higher in Mechatronic, 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 remuneration package in line with relevant experience and skills.

Application process:

Applications, including **cover 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. Applications in **English** only. Only shortlisted applicants will be contacted. Confidentiality is assured.

- Are you eligible to work in Spain?
- 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?
- Have you built something in your spare time? If so, please describe it briefly.