



Case Study

Eoghan Summers

IDCORE doesn't just focus on offshore renewable energy technologies, it delivers a wide range of research relevant to the successful future development of the sector.

Eoghan's project is a case in point – he is working on hydrogen, looking at all aspects of how it can be produced, stored and utilised as an alternative or complementary energy vector to electricity. In particular, he is looking at the impacts of variable supply and demand for energy and the materials issues this can create when transporting hydrogen via pipeline. He is currently building a model using software developed in the oil and gas industry of a potential hydrogen network for Northeast Scotland. He is hoping that he will also be able to go on and explore the options for geological storage of hydrogen – a key aspect of any future system that uses hydrogen to address variations in renewable energy availability.

Sponsor

GDG, the sponsor of Eoghan's project, is a specialist offshore engineering and design consultancy, with a particular focus in the offshore wind sector. They see hydrogen as a likely important component of any future energy system, and building their capabilities in what could be a very demanding area will help them to enter a new and important market for their services.

GDG
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GEOSOLUTIONS

We now have two IDCORE research engineers working at GDG and we are really pleased with the impact they are having on our business. The structure of the training and support they receive means that they are well informed about the sector and are able to take a very active role in the organisation from an early stage.

The involvement of multiple institutions with joint academic supervision teams also gives us unrivalled access to world-leading research. A number of our staff are undertaking PhDs, and our parent company, Venterra, has a long history of working with the academic sector. In our experience you just don't get the sort of access that IDCORE provides with other programmes.

*Mohammed Almoghayer,
Senior Offshore Project Manager, GDG*

Eoghan has drawn heavily on the first-year IDCORE modules as he has been developing his project. So far, he has been focussed on reviewing the relevant literature but to such a level that he has a paper on the work accepted for presentation at an ASME conference – this has really impressed GDG.



GDG have provided me support and expertise whilst allowing me to shape my own project relating to green hydrogen. This has allowed me to build a research project I'm very excited to work on, whilst also building up expertise in the area of green hydrogen for GDG. They are using me as their 'hydrogen guy' in tendering exercises, and they have even had me delivering training on hydrogen to other professionals working in the renewables sector in Ireland. It feels great to be playing an important role in building a bridge between the needs of the sector and the knowledge and capabilities available in academia.

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Eoghan's Background

Eoghan came to IDCORE after spending two years working as a surf instructor in Southwest Portugal. This was only ever going to be a temporary career break, since he had trained as a Mechanical Engineer, previously completing the five-year integrated Masters course at the University of Strathclyde and an internship with Scottish Power Transmission.

On returning to the UK he had wanted to build a career working in renewables as part of his personal commitment to tackling climate change and had started looking for both PhDs and jobs in the sector. IDCORE seemed like an excellent option, combining both industrial experience, research, and his love of the sea. It also provided him with a way back into engineering after two years out.

Eoghan values the flexible working environment that GDG offer to their staff, and often splits his work hours between GDG's Edinburgh office, and the IDCORE office at the University. This has allowed him to build on the close relationships in his own cohort by meeting and working with others from across the IDCORE community. GDG's main office is in Ireland, so Eoghan does most of his work remotely, and he has enjoyed the additional networking opportunities this has provided, an added advantage of working with an international company.



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