



North Sea Decarbonisation Conference Ocean Energy Session

TIGER (*Tidal stream Industry enerGisEr pRoject*)

11 May 2021

Simon Cheeseman

I'm an experienced engineer and programme manager, having worked in both the private and public sectors.

During my career I've held various senior manager roles with responsibility for high value technology development projects across the aerospace, communications and marine renewables sectors.

I now work for the Offshore Renewable Energy Catapult, a private not for profit research organisation. I work in the Research and Disruptive Innovation directorate. I manage the Catapult's 'Cornwall Ocean Energy Centre' in Hayle. I'm responsible for the Catapult's marine renewables strategy and the South West regional development programme focusing on accelerating and de-risking deployment of floating offshore wind in the Celtic Sea, off the coast of Cornwall.



ORE Catapult:

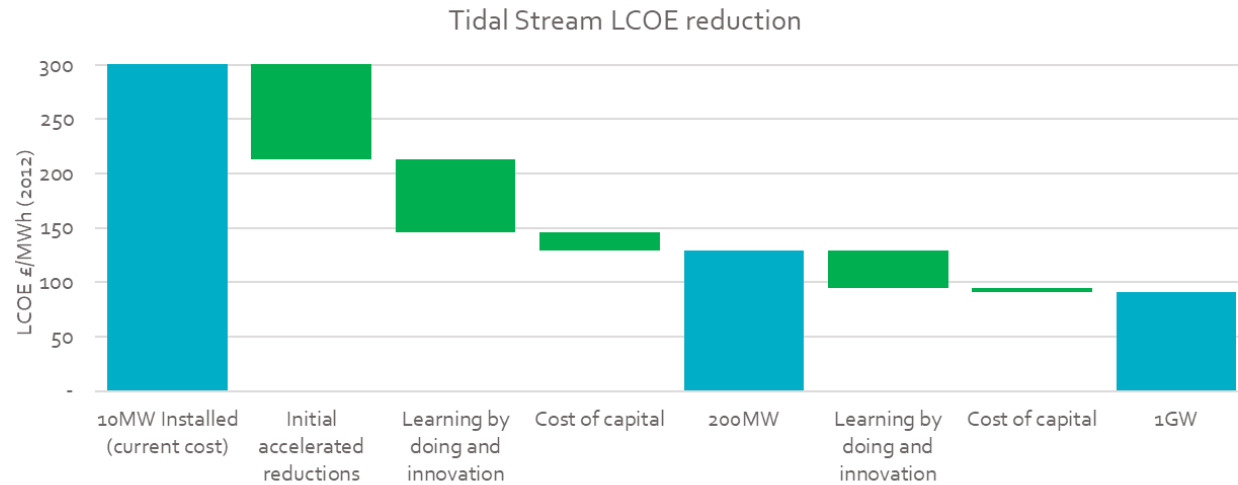
- UK's leading research and technology organisation for offshore renewable energy (offshore wind, wave and tidal energy)
- With offices and test facilities across the UK, our role is to help academia and industry develop new, innovative technology, to drive down the cost of renewable energy
- 200+ employees: researchers, engineers, technicians, project managers, and professional services staff



ORE Catapult – Innovative technology, design, test & validation



Tidal stream sector needs to prove a cost reduction forecast to achieve £90MWhr at 1GW deployed capacity



Initial Accelerated Reductions

- Economies of Volume
- Economies of Scale
- Accelerated Learning

Learning by Doing & Innovation

- Optimised processes & manufacturing
- Real life operational & weather data
- Collaborative shared learning

Cost of Capital

- Increase project debt
- Reduce equity risk

LCOE expressed in pre-tax real, 2012

OREC 2018 Wave & Tidal cost reduction pathway report

Assessed how the UK's Tidal Stream and Wave Energy industries can perform against UK Governments three tests set out in its 2017 Clean Growth Strategy

TIGER (Tidal stream Industry EnerGiser Project)

- TIGER is a €45.4m (€29.9m ERDF), 4-year project, with 18 partners, approved 2 Jul 2019, completes Jun 2023
- Comprises a portfolio of 6 projects, installing new tidal turbines at 5 sites across the UK/FR Channel region, developing a broader UK/FR supply chain, UK/FR trade body alliance and evidence of cost reduction across the tidal sector
- Funded through the [Interreg France Channel \(Manche\) England programme](#), a collaborative cross border project
- Led by ORE Catapult from its regional office in Hayle, Cornwall.

17 Partners led by ORE Catapult



TIGER (Tidal stream Industry EnerGiser Project)



Cambrian Offshore

- Refurbish or replace Delta Stream and foundation structure. Redeploy in 2022.

Hydroquest

- Turbine testing at Paimpol-Bréhat in 2020/21
- New 3MW turbine design in progress for deployment in 2023

QED(Naval)

- Sub hub proving trials Isle of Wight in Autumn 2021
- Design work started on industrial scale Sub hub platform

Normandie Hydrolienne

- Consenting at Le Raz Blanchard for deployment in 2023/4
- New 3MW turbine design underway, largest rotor

Orbital

- New platform and turbine design underway
- Targeting deployment at a TIGER site from 2023/4

MHE56

- Sabella - new rotor and turbine design
- Deployment in 2022

MINESTO

- Consent and infrastructure planning for deployment at Paimpol-Bréhat in late 2021

TIGER Other work

- **Website:** online presence, educational video available in Summer 2021
- **Project Partner collaboration:** consenting lessons, cable routing, blade pitch control
- **Site data gathering:** data centres established at each tidal site
- **Meetings with finance community:** reduce cost of capital and provide tailored insurance
- **UK/FR Supply Chain portal:** solution identified and under development
- **New technology designs:** over 40 new components identified so far
- **Supply Chain support:** engineering support for component test & validation
- **Conferences:** project/ sector updates, introductions, B-2-B facilitated sessions
- **Links to other EU projects:** e.g. SELKIE – tidal system design tools , SAMARCH - monitoring



Supply Chain Engagement activities

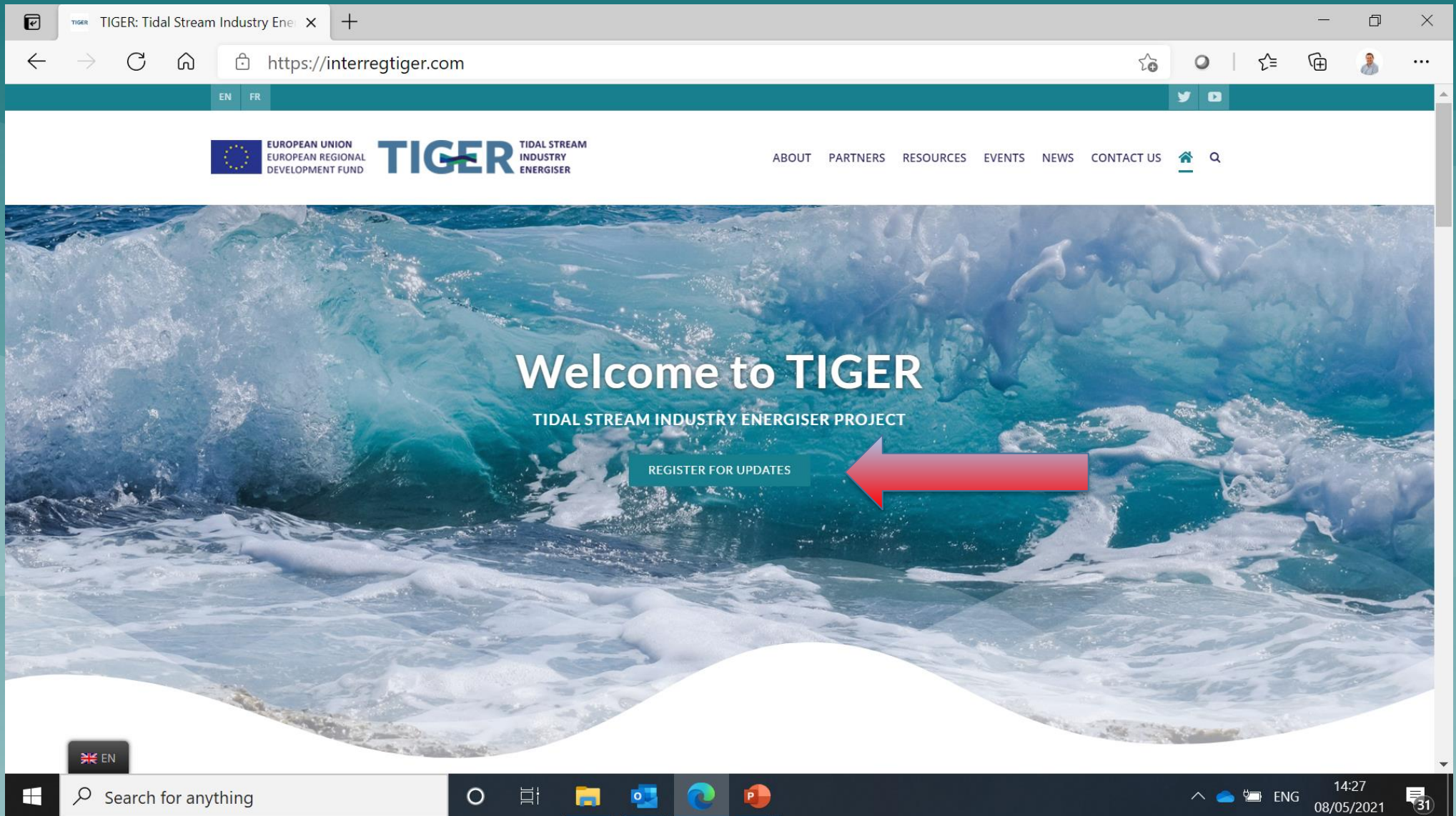


Virtual meet the buyer events:

- **FR sites and tidal developers Thu 10th June 2021 at 09:30 – 11:00 (BST)**
- **UK sites and tidal developers Tue 15th June 2021 at 09:30 – 11:00 (BST)**

Supply chain support required for:

- **Blade design and manufacture, weight reduction in nacelles and drivetrain components, volume manufacture and assembly**
- **Offshore electrical architecture – subsea cables, connectors, subsea hubs**
- **Offshore operations – fast, low cost sea bed drilling, asset protection, vessels**



Thank You

Contact

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