PAN-EUROPEAN CONSORTIUM SECURES FUNDING FOR TIDAL TURBINE SUBSYSTEM DEVELOPMENT

A European tidal energy consortium, led by Nova Innovation in Scotland, has secured funding from the European Commission to demonstrate and validate an innovative subsystem (direct drive power take-off (PTO) solution) for tidal turbines. The technology, when commercialised, will reduce the lifetime cost of tidal power by 20% and provide long term system reliability. The consortium is to receive grant funding of €4.4M under the European Union's Horizon 2020 Framework Programme for research and innovation.

The project titled ***TiPA*** (**Ti**dal turbine **P**ower take-off **A**ccelerator) will run for 36 months. It will build the PTO subsystem and conduct accelerated onshore testing in Germany followed by in-sea testing in Scotland with third party validation of the design and the test results. The PTO subsystem is the component that transforms the mechanical power in the tidal turbine rotor into electricity that is exported into the grid. www.tipa-h2020.eu

The project consortium brings together complementary world leading expertise: Nova Innovation Ltd (tidal turbine direct drive generator); Siemens plc (power electronics); SKF (bearing and seals); the University of Edinburgh (knowledge and modelling); Chair for Wind Power Drives – RWTH Aachen University (facility for drive train testing); Delft Technical University (knowledge and modelling); and Wood Group Kenny SAS | SgurrEnergy (assessing and verifying the technology).

Once complete the project deliverables will be used to raise market confidence in the maturing tidal energy industry and to maximise the benefit of the project to the ocean energy sector as a whole. A commercialisation strategy will be developed, for selling and licensing the PTO to tidal energy technology developers and to explore potential uses outside the tidal sector. This funded project gives Europe a leader-in-the-field advantage and will enable it to export technology to international markets as the industry grows.

Simon Forrest, Managing Director of Nova Innovation, said: "We are delighted to collaborate with our European partner organisations to deliver TiPA to develop and demonstrate our innovative direct drive PTO for tidal turbines. This will be a major step forwards for the global sector and significantly drive down the lifetime cost of tidal energy. We are extremely appreciative to the European Commission for their belief in our technology and sector, and are really looking forward to taking the PTO onwards to a commercial reality for the industry."

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TiPA - full stream ahead for tidal energy commercialisation

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Notes to Editors :

About Horizon 2020 Work Programme -

Horizon 2020's 'Secure, Clean and Efficient Energy' programme of work calls for increased energy security, solidarity and trust, a fully integrated European energy market, improved energy efficiency contributing to the

moderation of demand, a decarbonisation of the economy as well as increased efforts as regards research, innovation and competitiveness.

With more than EUR 1 billion dedicated to supporting energy-related research and innovation activities in 2016-2017, this Work Programme is a key instrument to progress towards a European Energy Union which provides EU consumers – households and businesses – with secure, sustainable, competitive and affordable energy. Achieving this goal will require a fundamental transformation of Europe's energy system

The LCE-07 call was for projects to develop the next generation technologies for renewable electricity and heating/cooling, and specifically within Ocean Energy, to increase performance and reliability of ocean energy subsystems. The programme is managed by the European Commission's Innovation and Networks Executive Agency (INEA).

Nova Innovation – www.novainnovation.com

Founded in 2010, Nova Innovation Ltd is a tidal energy company that designs, builds, installs and operates tidal energy projects. Nova installed the world's first community-owned tidal project in 2014 and the world's first offshore tidal array in 2016. Nova Innovation is recognised as one of the world's leading tidal energy companies.

The University of Edinburgh – http://www.eng.ed.ac.uk/research/institutes/ies

World leaders in marine renewable energy systems, electrical power conversion, grid integration, and the inter-disciplinary assessment and socio-economic modelling of energy systems.

SKF– http://www.skf.com

As a globally recognised expert in the simulation and delivery of bearing and sealing solutions, SKF has extensive experience with tidal energy companies in developing a range of solutions for tidal stream turbines.

Delft Technical University – http://www.tudelft.nl/en/

World leaders in novel electrical machine design, modelling and implementation. Has extensive experience in marine renewables and specifically direct drive generator systems for ocean energy devices and offshore wind turbines.

Chair for Wind Power Drives - RWTH Aachen University – https://www.cwd.rwth-aachen.de/1/home/

The Chair of Wind Power Drives is a leading European facility for full-size commercial wind turbine drive train testing. Experienced in testing numerous turbine drive trains up to 4 MW in scale.

Siemens plc – https://www.siemens.com/global/en/home.html

World-leading supplier of electric drives and drive train components. Decades of experience in renewable energy as one of the worlds' leading wind turbine suppliers.

Wood Group Kenny SAS | **SgurrEnergy – https://www.woodgroup.com/what-we-do/view-by-market/clean-energy** | **http://www.sgurrenergy.com/**

World leader in offshore technologies and renewables having assessed over 160 GW of renewable energy developments internationally. Decades of experience in assessing and verifying renewable technologies.