# Direct Drive Tidal Turbine (D2T2) Accelerator project

## Fact Sheet

Project Information

**D2T2**

Grant agreement ID: 734032

Project website

**DOI**
10.3030/734032

Project closed

**EC signature date**
26 September 2016

**Start date**
1 October 2016

**End date**
31 March 2020

**Funded under**
SOCIETAL CHALLENGES - Secure, clean and efficient energy

**Total cost**
€ 3 214 666,25

**EU contribution**
€ 2 250 266,00

**Coordinated by**
NOVA INNOVATION LTD
United Kingdom

## Objective

Nova Innovation is a leading designer and manufacturer of tidal turbines. We have designed, built and deployed two grid-connected tidal turbines at our consented tidal energy site in Scotland. In 2016 we will deploy one of the world's first tidal arrays.

The problem addressed in this project is that existing technologies for exploiting tidal stream energy are
(a) relatively unproven,
(b) expensive and
(c) have yet to gain the confidence of the market.

In this project we will address these three barriers by demonstrating a prototype turbine incorporating our novel Direct Drive generator at a real-world tidal site.

Our goal in this project is to reduce the lifetime cost of tidal energy by 20%. Outputs will be independently verified, and will demonstrate improved efficiency, improved reliability and lower maintenance costs. The results will be disseminated to raise investor and market confidence in the emerging tidal energy industry.

This Direct Drive Tidal Turbine (D2T2) Accelerator Project is at the core of Nova Innovation's business strategy. Innovation to cut costs and improve performance is essential to the future of the tidal energy industry. This project builds on five years of research and development, including the successful completion of a Phase 1 SME Instrument feasibility study into the Direct Drive Turbine. Demonstrating a full-scale device in an operational environment will bring the product from TRL6 to TRL8.

Potential customers are tidal energy project developers seeking to generate predictable, reliable energy from the tides at minimum lifetime cost. The market for tidal power is global, but Europe is taking the lead with potential clients in the UK, France and Ireland. Once proven in Europe the technology can be exported worldwide, with a potential global market of 800 TWh per annum (IEA-OES), or annual electricity sales of over €40 billion.

## Fields of science (EuroSciVoc)

engineering and technology > environmental engineering > energy and fuels > renewable energy > hydroelectricity > marine energy > **tidal energy**

## Programme(s)

H2020-EU.3.3. - SOCIETAL CHALLENGES - Secure, clean and efficient energy MAIN PROGRAMME

H2020-EU.2.1.1. - INDUSTRIAL LEADERSHIP - Leadership in enabling and industrial technologies - Information and Communication Technologies (ICT)

H2020-EU.2.3.1. - Mainstreaming SME support, especially through a dedicated instrument

## Topic(s)

SMEInst-09-2016-2017 - Stimulating the innovation potential of SMEs for a low carbon and efficient energy system

## Call for proposal

H2020-SMEInst-2016-2017

See other projects for this call

## Sub call

H2020-SMEINST-2-2016-2017

## Funding Scheme

SME-2 - SME instrument phase 2

## Coordinator

**NOVA INNOVATION LTD**

Net EU contribution

**€ 2 250 266,00**

Total cost

**€ 3 214 666,25**

Address

**45 TIMBER BUSH**
**EH6 6QH Edinburgh**
**United Kingdom**

SME

**Yes**

Region

**Scotland > Eastern Scotland > Edinburgh**

Activity type

**Private for-profit entities (excluding Higher or Secondary Education Establishments)**

Links

Contact the organisation
Participation in EU R&I programmes

**Last update:** 16 August 2022

**Permalink:** https://cordis.europa.eu/project/id/734032