



# Our Ocean: Policy Recommendations

*February 2019*

Iridescent Ideas CIC



Plymouth  
Social Enterprise City



Business advice with a different perspective



## Developing community-owned tidal power

*Learning from the Our Ocean project: What would help future projects?*

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## Background

Paul Hamlyn Foundation awarded Iridescent Ideas CIC a small grant in 2017 to explore the concept of community-owned tidal power in Plymouth. Our final report on the project can be found on our website. This paper explores some policy issues that national government, local government and interested organizations could address to make these projects easier to develop in future.

## About Iridescent Ideas CIC

Iridescent Ideas CIC is an award-winning social enterprise and Community Interest Company founded in Plymouth in 2011. Our vision is to see a more socially enterprising economy. We provide business services that enable other ethical organizations to achieve their aims and objectives. For more about us please go to [www.iridescentideas.com](http://www.iridescentideas.com).

## Concept: about the Our Ocean project

*"Half of Europe's tidal energy [is] around UK shores. The seas could help us reach a huge chunk of our 2020 energy targets."*<sup>1</sup>

It is estimated that marine renewable energy could provide:

- Up to £70 billion to the UK economy by 2050 and could create tens of thousands of jobs<sup>2</sup>
- Over 20% of the UK's electricity demand<sup>3</sup>.

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<sup>1</sup> Dr Jennifer Hoxton, University Highlands and Islands - NERC Planet Earth, Summer 2017.

<sup>2</sup> Carbon Trust quoted in the Marine Energy Park Prospectus (RegenSW) - page 4

There has been considerable social enterprise<sup>4</sup> and community-led development in the wind and solar renewable energy sectors, however, within the marine renewable energy field there has been very little progress.

The project explored the feasibility of developing community-owned tidal power in Plymouth. Our study engaged a range of partners including University of Plymouth, Plymouth Marine Laboratory, local sailing organizations, tech businesses and others. We met and worked with:

- Community energy specialists in Plymouth and Scotland
- Our local authority
- Regional renewable energy experts
- A tidal turbine developer in Scotland
- Engineering consultancies
- The Queens Harbour Master
- Power company
- Marine Management Organization.

Based on the data we have available into tidal flow and costs; current technology is not suitable for the locations in Plymouth we identified.

We have learned a lot from developing the project. The detailed findings are available on a website we created about the project. We have also set up Tide Plymouth – a locally owned social enterprise – to explore future opportunities around tidal power.

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<sup>3</sup> South West Marine Energy Park Prospectus, Jan 2012, RegenSW - page 4

<sup>4</sup> A social enterprise is a business with social or environmental aims. It exists to maximise profit for the pursuit of these goals.

We decided to write this short paper about some of the policy issues we faced and also things we wished we'd known when we started! Much time could be saved for future projects if some of the policy barriers could be addressed.

### Availability of reliable tidal flow data

#### *Issue*

A tidal power project needs appropriate tidal flow to work effectively. Finding accurate data about tidal flows proved problematic. We had to commission specialist research into this area and, even then, the researchers found data difficult to find.

#### *Recommendation*

- Government research agencies should invest in a research project that gathers existing data and/or maps tidal flows around the country more accurately and comprehensively. This database could be publicly available for anyone developing tidal power projects.

### Tax incentives

#### *Issue*

There are a few tax incentives for developing renewable projects. However, a significant barrier to developing community-owned schemes is the removal of Social Investment Tax Relief (SITR) from community energy projects. This would de-risk future projects and incentivise more investment into community-owned renewables.

#### *Recommendation*

- Government should allow SITR to be claimed on community-owned renewable projects.

### Investment in publicly available research

#### *Issue*

There is a general lack of publicly available research into community-owned tidal projects. We only found out late in the day that some other feasibility projects had taken place around Plymouth. If this data had been publicly available, it would have saved considerable time.

#### *Recommendation*

- A 'moral' case – local developers (private, public or third sector) of tidal power projects could make their data publicly available.
- Any government backed schemes should insist on research results being made public.

### Investment in technology

#### *Issue*

We need more small-scale schemes with technology in the water. Many tidal power schemes are huge (e.g. Swansea lagoon, Severn Barrier) with significant costs, environmental impact and political implications.

We believe that smaller, community-owned turbines could herald the dawn of a new approach to tidal power and unleash some of the energy potential. These projects will be more affordable, have less environmental impact and with community support face fewer political barriers. However, technology developments are slow in this area.

### *Recommendation*

- Government could set up a specific scheme to invest in micro tidal turbine technology.

## Understanding community-ownership

### *Issue*

In our experience explaining the concepts of community ownership and social enterprise took time and effort yet these models provide a fantastic opportunity for communities to own their own energy, to raise significant sums of investment and to mitigate community concerns about the impact of such projects. Whilst there is some funding support available from organizations like Power to Change (see below) there needs to be more work to make community-ownership and social enterprise more publicly understood as an attractive option for developers.

### *Recommendation*

- Government could invest more in research and dissemination about these models of ownership.

- Local authorities and local social enterprise communities need to find ways to engage more people.
- Universities and schools should teach social enterprise as a core component of business studies type courses.

## Project development funding

### *Issue*

There is limited funding available to help develop schemes. We recognise that these are business schemes and, on the whole, they should succeed or fail on their own commercial merits. However, if government believes in creating an economy that is more inclusive and has less environmental impact then creating funds to support development of such schemes into this area would be a significant benefit.

### *Recommendation*

- The Urban Community Energy fund could be reinstated and expanded to include rural schemes.
- Power to Change funding for community-owned business projects could have a specific scheme for marine energy projects.

## Summary

We think there is a significant gap and potential for innovation in this market to create a more collaborative and resilient economy.

Our research shows that there very few community owned marine renewable developments. There appears to have been

little policy or strategic development into supporting these types of projects. When compared to the wind and solar renewable energy sectors where social enterprise is a common business model this is surprising. A further knowledge gap exists in the innovative aspect of micro, or small scale, marine energy generation.

We think a radical change to the way marine energy developments are being approached could bring huge advantages to local economies, especially if community-owned or operated in socially enterprising ways.

Set against the wider contexts of climate change, energy security and fuel costs it is becoming more and more important that communities can own and control their energy generation. Stimulating an interest in community ownership of marine energy generation would be a fantastic step towards tackling these issues.

### Keep up to date

To keep up to date with future projects and activities visit Tide Plymouth website:

[www.tideplymouth.co.uk](http://www.tideplymouth.co.uk)

