

Development of International Standards and Certification schemes for Marine Energy Technologies

D.2.9.1

Identifying Barriers and Bottlenecks [PTEC]

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Table of Contents

- 1. Introduction 4
- 2. Issue and Implications 4
- 3. Lobbying and Industry Requirement 4

1. Introduction

This report presents the details of the Perpetuus Tidal Energy Centre's identification of barriers and bottlenecks as delivered for MET-CERTIFIED deliverable D.2.9.1.

The Perpetuus Tidal Energy Centre (PTEC) is a tidal stream energy project with a planned electrical generation capacity of 30MW. Different tidal turbine technologies will be used, deployed across berths of 5-10MW capacity.

The project comprises an onshore site with substation/control room building and an offshore development site for the deployment of tidal devices, with the two sites being connected by a subsea cable corridor along which the power cables pass.

A key objective of PTEC will be to commercially demonstrate the long term running, management and monitoring of arrays of proven tidal devices (previously tested at EMEC or equivalent sites). Maintenance work for these proven tidal devices is expected to be less than for the earlier prototypes, and is expected to focus on the management and monitoring aspects of arrays, paving the way for larger commercial deployment of proven tidal devices elsewhere.

2. Issue and Implications

In November 2016, the UK Government withdrew the marine energy 'minima' from the second Contract for Difference (CfD) allocation round and currently has no intention of reinstating it for CfD Rounds 3 and 4. No minima means that marine energy technologies and projects need to compete with other more mature renewables for revenue subsidies, such as offshore wind (Round 2 CfD strike price of £105/MWh, although expected to clear at £60-90/MWh). As the Round 2 CfD budget is £290m p.a., it is expected that this may only support a proportion of offshore wind and other projects; with over 8,000MW of eligible offshore wind projects, competition is fierce, which will drive down the cost of energy. Resultantly, projects such as PTEC cannot compete with offshore wind on price and so an alternative revenue support mechanism is required for emerging technologies. Following an intensive UK-wide lobbying campaign (discussed in Section 3), it is expected that the UK Government will clarify its direction of travel on this issue in the first half of 2018.

3. Lobbying Campaign and Industry Proposal

PTEC is a member of RenewableUK (RUK) and sits on its Ocean Energy Race (OER) steering group. The OER campaign was launched in November 2016 and has already delivered valuable marine energy reports and lobbying activities. The core focus of the campaign is the marine energy sector's close alignment with and delivery of the UK's industrial strategy.

Accordingly, PTEC has worked influentially with RUK, the informal UK marine strategy group, MPs, devolved administrations, support organisations and supply chain companies in formulating a new strategy and policy design as part of the industrial strategy. This included extensive engagement with the Department for Business, Energy and Industrial Strategy (BEIS), other Government departments, local MPs and non-governmental organisations (NGO's). All of this work supported RUK's submission to BEIS' industrial strategy green paper, which included PTEC as a case study and the marine energy sector's new revenue subsidy proposal, paving the way for an effective and continued lobbying strategy.

The strategic arguments for marine energy align closely with the industrial strategy's key pillars and PTEC continues to work with RUK on positioning. The major implication, however, is the current high cost of marine energy and therefore the key arguments focus on improving fragile coastal communities, local growth, job creation, productivity, inward investment, greater energy balance/mix, exports and potential for reduction in cost of energy with continued deployment. PTEC and industry colleagues continue to lead the Solent lobbying efforts as well as engage with relevant organisations and project partners on cost reduction areas; the Solent region has been identified as one of four strategic areas for marine energy within the UK and is widely recognised as the heart of the UK's marine and maritime sector.

The industry's new revenue subsidy proposal is an Innovation Power Purchase Agreement (IPPA) for projects 10MW and less (PTEC's individual berth holders would be eligible), then a bridging mechanism for projects greater than 10MW but not yet CfD competitive. There is potential for the IPPA to form part of the finance bill, although this is to be confirmed with HM Treasury. Over the course of the next year, the IPPA will be developed in more detail in parallel with the lobbying campaign.