Environmental Audit Committee

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Rt Hon Kwasi Kwarteng MP
Secretary of State for Business, Energy and Industrial Strategy
Department for Business, Energy and Industrial Strategy
1 Victoria Street
London SW1H 0ET

Sent by email only

30th March 2021

Dear Secretary of State –

Technological Innovations and Climate Change inquiry: tidal power

The Environmental Audit Committee has been examining the potential contribution of tidal power technologies to the UK's renewable energy mix and its industrial base as part of our continuing inquiry into *Technological Innovations and Climate Change*. Our call for evidence, issued in December 2020, resulted in 70 responses, including a response from your Department.[1] On 27 January we held an evidence session at which we heard from representatives of the tidal stream and tidal range sectors and also from Rt Hon Charles Hendry CBE, Chair of the Independent Review of Tidal Lagoons.[2]

The Committee has reviewed the paper submitted by your Department in the light of the evidence we have taken. A number of questions have arisen concerning the Government's policy on support of tidal stream and tidal range, and the benefits such support might have for UK manufacturers in the supply chain.

The evidence we heard on 27 January, taken in conjunction with the written evidence we have received, has led us to form the view that there is substantial potential for the tidal sector to make a significant and distinct contribution to the UK's future mix of energy generated from renewable sources. We note in particular that the UK has demonstrated world-leading technological development in the tidal stream sector, and that current projects in development already have the capacity to deliver 1GW of electricity to the grid.[3]

While we are pleased to note that your Department, in its memorandum, has recognised the requirement for a diverse energy generating mix, including complementing offshore wind with other renewable generation sources, it was disappointing to observe that in the Energy White Paper of December 2020 the Government would only commit to 'considering' the role of tidal (and wave) energy.[4] In our view this single reference in a substantial policy document significantly undersells the UK's potential in this field and sends the weakest of policy signals to potential investors. We trust that the Government will rectify this lapse in subsequent policy statements on the UK's renewable energy mix.

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[1] The responses to the call for evidence are published on the Committee's website at https://committees.parliament.uk/work/780/technological-innovations-and-climate-change-tidal-power/publications/written-evidence/

[2] The transcript of the evidence session is published at https://committees.parliament.uk/oralevidence/1608/html/

[3] Q2 [Sue Barr, Chair, UK Marine Energy Council]

[4] *Energy White Paper: Powering our Net Zero Future*, CP 336, December 2020, p. 46

We note the amendments made to the Contracts for Difference (CfD) scheme in November 2020 ahead of the opening of Allocation Round 4 (AR4), expected later in 2021. These were made in consequence of the consultation which opened in May 2020. The enthusiastic response received from the tidal power sector to that consultation has been matched, if not exceeded, by the response to our call for evidence.

Your Department is currently considering the responses to its follow-up call for evidence on the scope for marine technologies across the UK, and is examining the support which Government could provide to move such technologies towards commercialisation.

We have considered the oral and written evidence we have received from representatives of the tidal stream and tidal range sectors. We consider that there is a strong case for your Department to stimulate the diversification of marine renewables of both types through the provision of appropriate support to set each sector on the route to swift commercialisation and expansion.

Tidal stream technologies appear to us to have significant potential in several respects. Your Department has cited, without apparent caveats, the 2018 report of the Offshore Renewable Energy (ORE) Catapult which concludes that the UK has a practical resource of 15GW for tidal stream generation—fifteen times the capacity currently in development—and that a reduction in generation costs to below £90/MWh can be secured, supported by deployment across the next two decades.[5]

Tidal stream, if adequately supported to commercialisation, could deliver the following benefits:

- Renewable power generation based on observable and reliable tidal patterns, delivering consistent output to the grid at predictable intervals
- Significant additional investment in research and development of tidal stream technologies, with potential further spin-offs to benefit the renewables sector
- Sustaining and maintaining the UK's position as a world leader in tidal stream technology
- Invigorating a specialist supply chain which is at present 80% UK based (by contrast with the supply chain for offshore wind technologies, for example)
- Boosting the potential for export of UK development expertise and UK-manufactured tidal turbines abroad to locations with significant tidal stream generation potential
- Increasing investment in the coastal regions where tidal stream resource is concentrated, thereby contributing to the levelling-up of the UK economy

In our view, the potential benefits of tidal stream merit Government support for the development of this sector to a stage where such projects begin to attract the significant commercial investment necessary to realise the benefits outlined above and predicted in the ORE Catapult report cited.

We therefore recommend that you engage constructively with the tidal stream sector to discuss an administrative strike price for CfD AR4 which will realistically allow the projects in development to proceed to the grid offer which will unlock full deployment. This appears to us to be the prerequisite to attracting large-scale investment, the upscaling of developments and thus the rapid reduction in generation costs foreseen by our witnesses.

Recognising the Government's legitimate concerns about the initial affordability of tidal stream, and the likelihood that the initial CfD strike price will be reflected in consumer bills, we also

[5] *Tidal Stream and Wave Energy Cost Reduction and Industrial Benefit*, ORE Catapult, May 2018

recommend that your Department, together with the Treasury, give consideration to the innovation power purchasing agreement model proposed by the sector, which provides an alternative means for developers and investors to be paid for energy generated.

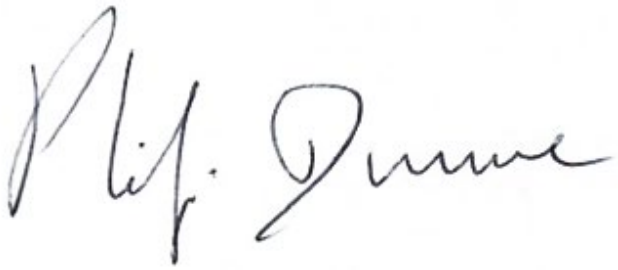
Turning to tidal range, we acknowledge the Department's concern about the high capex costs of lagoon or barrage projects which require significant civil engineering undertakings. The evidence we have received suggests that, once these costs are paid off, the energy generated from range projects would be very low in cost and would be delivered over a longer time horizon than (for instance) energy generated from wind installations, which require repeated renewal. There appears to be an apparent distortion in cost/benefit modelling which indicates that the low long-term costs of tidal range projects are not being adequately assessed. The Committee would be grateful if you would address this issue in your response.

Your Department has indicated that there are a number of tidal range projects which can be built at costs significantly low enough to produce electricity at a cost of £90/MWh or less, because the civil engineering work required is less substantial than in large-scale projects. Development of these projects beyond concept stage has stalled because detailed studies have not been undertaken. We recommend that the Department support the industry in the diversification of the UK renewable energy mix, the creation of employment opportunities and the development of tidal range technology by establishing a dedicated fund to support the studies required.

The Committee would be grateful to receive a response to this letter not later than 19 April 2021, addressing the points we have made above and indicating the timeline for decisions which will affect the development of the tidal power technology sector. This letter will be published on the Committee's website on 31 March, and I expect the Committee will wish to publish your response.

I am copying this letter to Darren Jones MP, Chair of the Business, Energy and Industrial Strategy Committee and to Rt Hon Greg Clark MP, Chair of the Science and Technology Committee; to Rt Hon Charles Hendry, Chair of the Independent Review of Tidal Lagoons; and to the other witnesses who gave oral evidence on 27 January.

Yours sincerely,



Rt Hon Philip Dunne MP
Chairman of the Environmental Audit Committee