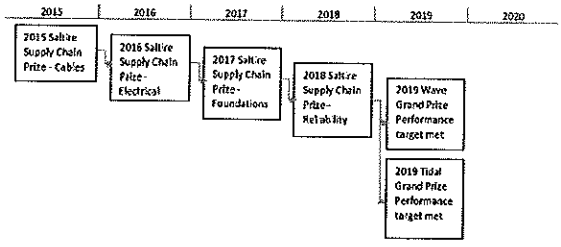
We have looked at Technology, Reliability and Performance milestones which could be appropriate to recast the prize on a shorter timeframe

Wave

Timeline	Narrative	THEMES and TARGETS Technology Milestones Installation targets	Reliability Availability targets	Performance Energy yield targets
2014	Single device demonstration at EMEC			
2015				
2016				
2017	First demonstration two devices (2MW or greater) installed at the same site (likely EMEC) installed, commissioned and generating to grid.	Two installed devices delivering 24hr continuous autonomous delivery to the grid		
2018			At least two devices on a single site generating for a minimum of one month at 80% availability	
2019	First demonstration wave array of two or more devices installed, commissioned and			Generating 2.5GWh within a 12 month period
2020	generating to grid on a commercial site	At least two devices on a single site generating concurrently for a month		
2021			At least two devices on a single site generating for a minimum of 12 months at 80% availability	
2022				Generating 5GWh within a 12 month period
2023	First commercial (>10MW) arrays generating to grid			
2024				
2025	More likely timescale when current Saltire Prize could be won			

Supply Chain Prizes could from the basis for intermediate prize, these could be in recognition of merit or larger challenge led initiatives

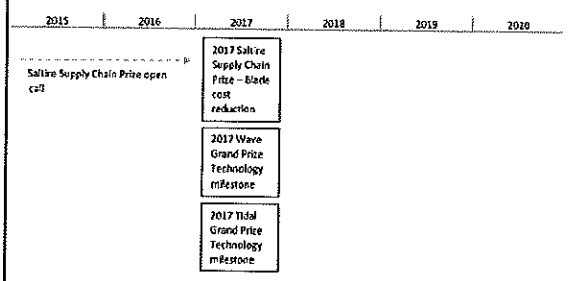
Rewarded success



Pros / Cons

- ✓ Smaller, incremental awards of £100k per annum
- ✓ Annual award, continual awareness of Saltire Prizes
- ✓ Rewards successful industry businesses
- × Greater administration required

Setting new challenges

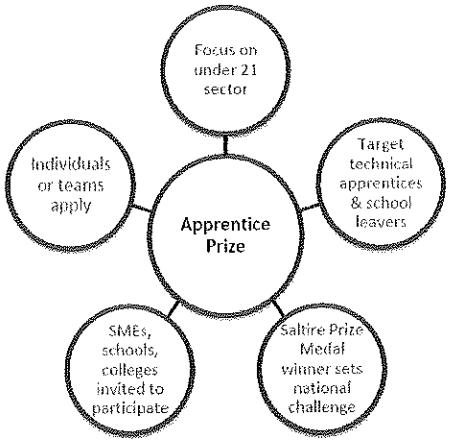


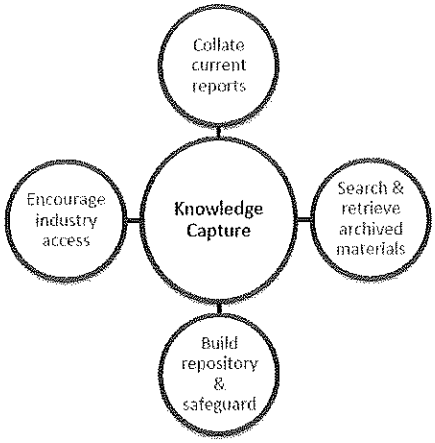
Pros / Cons

- ✓ Longer prize period, low administration burden
- ✓ Could attract new players to the market
- ✓ Breaks key industry barriers
- × Fewer opportunities to raise profile of Saltire Prizes

CATAPULT
Offshore Renewable Energy

To attract broader appeal, apprentice prizes could be developed, possibly set by the winner of the "Saltire Medal" each year





CATAPULT
Offshore Renewable Energy

Many thanks

[Redacted]

[Redacted]
Offshore Renewables Team – Saltire Prize
Scottish Government |5 Atlantic Quay | 150 Broomielaw |4th Floor | Glasgow | G2 8LU

Tel: [Redacted]| Blackberry: [Redacted]| E-mail[Redacted]

Website: www.saltireprize.com **Follow us on Twitter:** www.twitter.com/SaltirePrize

11. Saltire Prize Proposal Discussion - please reply ASAP – 03/04/14

Dear All

I'm looking to get a time set in the diary for a teleconference to discuss the Saltire Prize proposal sent on Friday by **[Redacted]**. Grateful if you could indicate your availability for the below slots by **COP Monday 7th April** to allow this to be set up.

Times are limited due to the variety of timezones to accommodate.

Date	**Time** (Santa Monica / Washington / UK)	**Please mark those you are available - X**
Wed 9th April	7am / 10am / 3pm	
Wed 9th	7:30am / 10:30am / 3:30pm	
Thur 10th	7am / 10am / 3pm	
	8am / 11am / 4pm	
Fri 11th	7am / 10am / 3pm	
Mon 14th	7am / 10am / 3pm	
	7:30am / 10:30am / 3:30pm	
Tue 15th	7am / 10am / 3pm	
	7:30am / 10:30am / 3:30pm	

Thanks

[Redacted]

[Redacted]
Offshore Renewables Team – Saltire Prize
Scottish Government |5 Atlantic Quay | 150 Broomielaw |4th Floor | Glasgow | G2 8LU

Tel:**[Redacted]**| Blackberry: **[Redacted]**| E-mail: **[Redacted]**@scotland.gsi.gov.uk

Website: www.saltireprize.com **Follow us on Twitter:** www.twitter.com/SaltirePrize

12. Saltire Prize Proposal discussion – Confirmation -03/04/14

Dear All

Many thanks for getting back to me so promptly regarding the teleconference to discuss the initial proposal paper from **[Redacted]**. I can now confirm that this will be on **Monday 14th April** at 07:30am (Santa Monica) / 10:30am (Washington DC) / 15:30pm (UK) time. (I hope I have all timezones correct!)

The dial in details are as follows:

Teleconference:

[Redacted]

For global access numbers please go to:
http://www.btconferencing.com/globalaccess/?bid=601

[Redacted]Mary – I have booked the Therapy room for us here in AQ.

Many thanks

[Redacted]

[Redacted]
Offshore Renewables Team – Saltire Prize
Scottish Government |5 Atlantic Quay | 150 Broomielaw |4th Floor | Glasgow | G2 8LU

Tel:**[Redacted]**| Blackberry: **[Redacted]**| E-mail: **[Redacted]**@scotland.gsi.gov.uk

Website: www.saltireprize.com **Follow us on Twitter:** www.twitter.com/SaltirePrize

13. Saltire Prize Challenge Committee – Copies of correspondence 01/01/14 – 13/02/15 & 14/02/18 – 11/02/19

Please provide a copy of all the correspondence that the Scottish Government has had with the Saltire Prize Challenge Committee since 1 January 2014.

Saltire Prize update - February 2015

Dear Challenge Committee Members,

It is almost a year since we last met. I hope you are all well.

There has been a lot of activity in Scotland since our last meeting on 18 March 2014. We have had a referendum on Scottish independence; we have a new First Minister, Nicola Sturgeon; and we have a new Scottish cabinet. Some ministers have stayed on in their previous roles, including our energy minister Fergus Ewing and the environment secretary Richard Lochhead.

It has been a turbulent year for the marine sector. We witnessed the sad demise of the UK's leading wave technology developer, Pelamis Wave Power, in November 2014, while our other leading wave company, Aquamarine Power, took the decision to downsize its business significantly in December 2014. Both had been competitors for the Saltire Prize. On a more positive note for one of the competitors, Atlantis Resources reached financial close on the first phase of the MeyGen tidal energy project in September 2014.

After our last meeting and the Committee's decision that a prize redesign was needed, we sought approval from ministers to commission a review of the competition guidelines. **[Redacted]** We have decided that instead of offering an annual medal and presenting an annual lecture, it would make more sense to offer these in alternate years. That means there will not be a Saltire Prize medal awarded at this year's Scottish Renewables conference dinner. We hope to be in a position to launch a new Saltire Prize later this year - ideally at the Scottish Renewables marine conference in September 2015.

I would therefore propose that the Challenge Committee does not meet, as it usually does, in the margins of the Scottish Renewables annual conference in March 2015. It is more likely that we will have a September meeting this year, although a conference call may be needed before that.

The developments of the last year show there are still significant hurdles for wave and tidal technologies to overcome in the path to commercial roll-out. It also confirms what the Challenge Committee already knew, that a prize for array deployment is premature when developers may need to reconsider the fundamentals of device design.

The lessons we have learned are that more support is needed for research and development and demonstration, and that support mechanisms have to be tailored to the technology type. You may have heard that we recently announced a completely new initiative to support wave technology development. Wave Energy Scotland (WES) will bring together the best engineering and academic minds to collaborate in a programme to improve device, subsystem and component design. WES has already acquired the intellectual property and a range of assets from Pelamis Wave Power and the WES team is in discussion with a number of wave developers about possible projects. The first open calls for bids for collaborative projects between technology developers and WES are being prepared and details will be announced in the coming weeks.

I will write to you again when I have feedback from ministers on the revised proposals. In the meantime, if you have any questions, do not hesitate to get in touch.

Best wishes,

[Redacted]

[Redacted]
Head of Offshore Renewables Policy Team

Energy and Climate Change Directorate
Telephone: **[Redacted]**BlackBerry: **[Redacted]**

From: [Redacted]
Sent: 26 March 2014 16:08
To: [Redacted]@ngs.org; **[Redacted]**@emec.org.uk; **[Redacted]**@rbs.com; **[Redacted]**@thecommonpool.com; **[Redacted]**@hw.ac.uk; **[Redacted]** (**[Redacted]**@forumforthefuture.org); **[Redacted]**@btinternet.com; **[Redacted]**@pure-energy-partners.com; Energy and Climate Change - Business Management
Cc: [Redacted]@ngs.org; **[Redacted]**@rbs.com; **[Redacted]** (**[Redacted]**@forumforthefuture.org); **[Redacted]**@pure-energy-partners.com; **[Redacted]**; **[Redacted]**
Subject: SPCC09 - Minutes and presentation from the meeting on 18 March 2014

Dear All

SPCC09 – Meeting minutes

Please find attached a copy of the minutes from the 9th Saltire Prize Challenge Committee Meeting held on 18 March 2014, together with a copy of the powerpoint presentation delivered by **[Redacted]** of the Offshore Renewable Energy Catapult Team.

<< File: Challenge Committee - SPCC09 - MINUTES of meeting on 18 March 2014.doc >> << File: Saltire Prize re-design options presentation 18_03_14.pdf >>

Many thanks

[Redacted]

[Redacted]
Offshore Renewables Team – Saltire Prize
Scottish Government |5 Atlantic Quay | 150 Broomielaw |4th Floor | Glasgow | G2 8LU

Tel: [Redacted]| Blackberry: [Redacted]E-mail: [Redacted]@scotland.gsi.gov.uk

Website: www.saltireprize.com **Follow us on Twitter:** www.twitter.com/SaltirePrize

14. Challenge Committee - SPCC10 - further update sent to members - 10 April 2015

[Redacted]

[Redacted] and I had a chat last week and he was just making sure he hadn't missed anything as it has been quiet about the Challenge of late.

I said we'd been talking at dinner the other night and my take was that my position has not changed from the phone conference following the last Committee meeting which is that the prize is not going to be won under the present rules. **[Redacted]**

In my opinion the prize is still a good idea, but we are at risk if we don't take it off show. In a minute someone is going to spot the lack of completion **[Redacted]**

[Redacted] said he has been speaking to other committee members and they have had the occasional question asked about how it is going. So we at least need to have a new position and make sure the members are not exposed. I think it had been left that at the last meeting in March that some specific ideas were put down by the Committee. I believe SGov was going to respond**[Redacted]** I know we had a conference call sometime after that, but I don't think there has been any progress since?

[Redacted] If not then do we need to set up a proper conference call to resolve what we are going to do and say? I have to say I think it would be unwise to drag the Committee Members to Scotland to do this and would suggest a good quality conference set up would be a better use of resources and valuable time than airfares and days travelling. I am also aware that Members would prefer to engage in substantive discussions rather than the 'show and tell' format of late. There seems little point in a set piece event for the sake of it when a well set up conference call would do the job just as well if not better.

My vote would be for us to admit that the prize was a good idea at the time, but that industry has not been able to get to this point. However Scotland still believes in the value of marine energy and therefore has put an enduring prize up for grabs. We still want to see our resources harvested. We are steadfastly behind this now and will remain so until the technology is ready. We are here when they are ready. So as a result we now need to re-define the rules and announce them when the Saltire medal is announced in March, but basically the prize needs to be put in a box and put on a high shelf for another day.

What do you think?

[Redacted]

[Redacted]

[Redacted]

15. Challenge Committee - SPCC10 - doodle poll sent - 13 April 2015

Dear Challenge Committee members,

Thanks for your comments so far. Please find attached a link to an online poll to check availability for a conference call. I have allowed 90 minutes for the call and will send out papers in advance.

http://doodle.com/pi69ps4xh58srzhg

Best wishes,

[Redacted]

[Redacted]
Head of Offshore Renewables Policy Team
Energy and Climate Change Directorate
Telephone: **[Redacted]**BlackBerry:**[Redacted]**

From: [Redacted]
Sent: 10 April 2015 15:12
To: **[Redacted]**@ngs.org; **[Redacted]**@emec.org.uk; **[Redacted]**@rbs.com; **[Redacted]**@thecommonpool.com; **[Redacted]**@hw.ac.uk; **[Redacted]** (**[Redacted]**@forumforthefuture.org); **[Redacted]**@btinternet.com; **[Redacted]**@pure-energy-partners.com; Energy and Climate Change - Business Management
Cc: **[Redacted]**@ngs.org; **[Redacted]**@rbs.com; **[Redacted]** (**[Redacted]**@forumforthefuture.org); **[Redacted]**@pure-energy-partners.com; **[Redacted]**; **[Redacted]**
Subject: Saltire Prize update - April 2015

<< File: Saltire Prize - Fresh blow to wave power as £10m prize sinks - article in The Herald - 28 February 2015.pdf >>

Dear Challenge Committee members,

As you are aware, we recently asked the energy minister to approve plans to redesign the Saltire Prize. I am pleased to tell you that Mr Ewing has agreed to this recommendation.

Scottish Renewables – the trade association for Scotland's renewable energy sector – has offered to convene a focus group of its members to suggest revised competition criteria. They will do this initial scoping work free of charge and present a number of options. As the focus group members will be industry experts rather than prize experts, we would then need to seek validation of these options from an independent expert with an understanding of innovation prizes. We will tender for this work in the usual way. It would be for the Challenge Committee to make the final decision on the revised prize guidelines.

On Challenge Committee involvement in the process, there are a number of options. You can get involved now; after the focus group stage; or after the expert validation stage. I would be interested in your thoughts on this.

I would also welcome your views on the initial 'instruction' to Scottish Renewables. So that the focus group is clear on the task, I propose something along the following lines.

> The Saltire Prize Challenge Committee would like the focus group to suggest three new prize options that:
>
> (i) recognise the different technological maturity of wave and tidal technologies;
>
> (ii) are likely to drive behaviour in the ocean energy sector;
>
> (iii) will help keep Scotland at the forefront of ocean energy innovation;
>
> (iv) strike the right balance between being ambitious and achievable;
>
> (v) will encourage the supply chain to work with developers to help address barriers to deployment of ocean energy technologies.

I would be happy to arrange a video conference so that we can discuss this instruction in more detail. This will also give us the opportunity to discuss how we make the best use of your time in the redesign process.

I will send an online poll separately to check your availability.

For those of you who may not have seen it, I am attaching an article from The Herald (28 February 2015) about the Saltire Prize, as well as the Herald leader comment of the same day.

In the meantime, I welcome any initial comments or questions that you may have.

Best wishes,

[Redacted]

[Redacted]
Head of Offshore Renewables Policy Team
Energy and Climate Change Directorate
Telephone: **[Redacted]**BlackBerry: **[Redacted]**

16. Challenge Committee - SPCC10 - minutes of conference calls on 24 April 2015 and 8 May 2015

SCOTTISH GOVERNMENT'S SALTIRE PRIZE CHALLENGE COMMITTEE

TENTH MEETING – 24 APRIL 2015

BY CONFERENCE CALL

Attendees

[Redacted]	National Geographic (chair)
[Redacted]	European Marine Energy Centre
[Redacted]	Buglass Energy Advisory
[Redacted]	Heriot-Watt University
[Redacted]	Common Pool
[Redacted]	Scottish Government (secretariat)
[Redacted]	Scottish Government (secretariat)

Welcome and introductions

[Redacted] thanked those present for joining the conference call.

Apologies

It was noted that this call only involved five of the nine challenge committee members as it had been difficult to find a date and time that suited all. It was agreed that the Saltire Prize secretariat would consult separately with the other four members.

Conference call aims

[Redacted] set out the objectives of the conference call, which were (i) to consider challenge committee members' involvement in the prize redesign process; and (ii) to discuss the role of Scottish Renewables in helping define a new challenge and the steer the committee should give to them.

Redesign process

[Redacted] asked **[Redacted]** to summarise the direction from ministers. **[Redacted]** explained that after the March 2014 meeting and the committee's decision that a prize redesign was needed, **[Redacted]** questioned whether marine

energy companies might prefer other forms of support rather than a prize. **[Redacted]**

Recent events in the wave sector and media interest in the prize have made the case for a review of the competition guidelines much stronger. Scottish Renewables, Scotland's trade association for the renewables sector, consulted some of its members and found that they were still very supportive of a marine innovation prize. Scottish Renewables offered to assist with the review by bringing together a focus group – free of charge – to suggest revised prize options. This information was relayed to the energy minister who approved the plans.

Committee members were keen to understand the new First Minister's interest in the prize as the Saltire Prize has always had a very strong association with the former First Minister. **[Redacted]** the current First Minister was very committed to supporting the sector. Furthermore, in her previous role as Deputy First Minister, she had hosted the high profile launch of the Grand Challenge in Orkney in August 2012 and so understood the issues well.

[Redacted] said that some committee members had fed back initial thoughts by email on the latest position. All were pleased that there was ministerial agreement to a review and most welcomed the involvement of an industry body in the process. There was a desire from some members for greater involvement in the prize design process and concerns from others about the role of Scottish Renewables (as their members would have an interest in winning the prize and because they are not experts in designing prizes). **[Redacted]** said that there would be no obligation for the committee to accept the ideas put forward by Scottish Renewables and acknowledged the need for further validation of options by a prize expert. **[Redacted]** advised that other neutral parties would be represented on the group, including the European Marine Energy Centre, the Offshore Renewable Energy Catapult and the Carbon Trust. She also added that Scottish Renewables expected its focus group to have three or four meetings.

Committee members felt that messaging on the redesigned prize was important and that the relaunch would have to be accompanied by a new set of carefully developed messages, acknowledging that the previous prize had failed for valid reasons.

[Redacted] asked if it was worth opening up the opportunity to a wider audience to get a greater variety of thoughts on what an appropriate Saltire Prize challenge might be. It was agreed that there would potentially be value in this and that we could issue a statement explaining that we have asked Scottish Renewables.to help us define a new challenge and inviting target groups (for example, other industry bodies or renewables/environmental consultancies) to submit ideas via Scottish Renewables.

Challenge Committee involvement

On Committee members' involvement, those on the call were very keen for regular consultation at each stage of prize development. **[Redacted]** said that some members had written to say they were happy with involvement at a later stage. It was therefore agreed that individual members would have the option of participating or not at each stage.

Steer to Scottish Renewables

A discussion followed about the draft instruction to Scottish Renewables. **[Redacted]** suggested that the Scottish Renewables focus group might also want to consider what new prize entrants might gain from participating but not winning (for example, are there other incentives such as introductions to venture capitalists, easier access to sites etc?). **[Redacted]** added that one criticism of the current prize was that it excluded smaller developers who nonetheless had big ambitions. In line with **[Redacted]** suggestion by email, it was agreed to amend ocean energy to marine energy. The secretariat agreed to take all these points into consideration and redraft the instruction (see revised instruction at **annex A**).

AOB

Committee members asked for reassurance that wave and tidal stream energy were still seen as priorities by the Scottish Government. **[Redacted]** said that the recent establishment of Wave Energy Scotland underlined ministers' commitment. She added that the redesign of the Saltire Prize offered the opportunity to bring it into line with current policy thinking on the need for tailored support for wave and tidal technologies. In other words, a well-designed prize could form part of a more coherent set of policy initiatives for the sector.

There was no other business and the call ended.

FOLLOW UP WITH OTHER CHALLENGE COMMITTEE MEMBERS

8 MAY 2015

BY CONFERENCE CALL

Attendees

[Redacted]	Heriot-Watt University
[Redacted]	Former Chief Scientist at BP
[Redacted]	Pure Energy Partners
Chris Stark	Scottish Government
[Redacted]	Scottish Government (secretariat)

1. Apologies

[Redacted] welcomed members to the call and recorded apologies from **[Redacted]**. She added that **[Redacted]** had emailed to say he was content with the minutes of the last call and the revised instruction to Scottish Renewables. Chris Stark introduced himself and explained that he was replacing Mary McAllan as the senior Scottish Government representative on the challenge committee.

Conference call aims

[Redacted] explained that the purpose of this follow up call was to seek the views of those who had not been able to participate in the conference call on 24 April.

Discussion

[Redacted] said that he had concerns about the first draft of the instruction to Scottish Renewables, which asked them to suggest prize options that were 'ambitious and achievable'. **[Redacted]** said that this point had been discussed during the last call and members had agreed to remove the line.

[Redacted] said it was important to learn from the earlier experience, particularly whether we could do a better job of promoting the revised prize. He also felt that committee members could be used more, not only in the prize redesign process but as ambassadors for Scotland's marine energy sector.

Committee members felt that it would be worthwhile asking Scottish Renewables to consider marine energy achievements outside Scotland, to ensure that we did not devise a new competition that had already or nearly been won in another part of the

world. It was also agreed that Scottish Renewables should consider how other technology/renewable energy innovation prizes have operated and what made them successful (e.g. the European Solar Prize). These points have been added to the instruction at annex A.

Members said they would be keen to be involved at each stage of the prize redesign process and wanted the opportunity to assess the options put forward by Scottish Renewables. However, they were divided on whether a prize expert would be needed after that. Some felt that it was better to take one step at a time, and that the involvement of a prize expert could be decided once the committee had had the opportunity to consider the work by Scottish Renewables. **[Redacted]** had previously suggested (by email) that it should be made clear to Scottish Renewables that there may be further development work required after they have submitted their options.

There was no other business and the call ended.

[Redacted]

Offshore Renewables Policy Team

May 2015

ANNEX A

INSTRUCTION TO SCOTTISH RENEWABLES

Aspiration: Accelerate the commercial development of wave and tidal technologies that can cost effectively and sustainably harness marine energy for the benefit of communities around the world.

Barriers: There are high costs and risks associated with these emerging technologies. Reduced investor appetite has hampered the development of the sector.

Objectives: Promote innovation in marine renewables. Rebuild investor confidence in the sector. Keep Scotland at the forefront of a global energy endeavour and international efforts to tackle climate change. Support the creation of a marine energy industry.

The Saltire Prize Challenge Committee would like the focus group to suggest three new prize options that:

(i) recognise the different technological maturity of wave and tidal technologies;

(ii) are likely to promote collaborative working and drive ambition in the marine energy sector;

(iii) will help keep Scotland at the forefront of marine energy innovation;

(iv) motivate entrants to take part (for example, the main cash prize may not be the only motivator; there may be other incentives such as introductions to panels of potential investors, support with business or marketing plans, provision of performance verification certificates etc).

(v) are inclusive and encourage participation from a full range of marine energy technology developers;

(vi) motivate other stakeholders, especially the large engineering companies, to work with developers (e.g. on subsystem innovation) to help address barriers to deployment of ocean energy technologies.

In developing the prize options, it would be helpful to consider how far the marine energy sector has developed around the globe to ensure that the revised Saltire Prize is genuinely exploring new frontiers. It would also be useful to assess how other technology/renewable energy innovation prizes have operated and what made them successful (e.g. the European Solar Prize).

17. Challenge Committee - State of the industry report - update to committee members - 9 April 2018

Dear **[Redacted]**, **[Redacted]**, **[Redacted]**, **[Redacted]**, **[Redacted]**, **[Redacted]** and **[Redacted]**

We have been advised by ClimateXChange that the 'state of the industry report' should be ready to share by the end of this week. My colleague **[Redacted]** will be in touch with you separately to set up a conference call meeting so that we can discuss it – and the implications for revised prize options. Ideally, we would like to have this call with you before the end of April.

I also wanted to tell you that I will be moving on from my post as the Scottish Government's head of emerging energy technologies. My last day will be 25 April. I will be moving to a new role in our recently established Directorate for International Trade and Investment.

My post will be advertised and filled soon. In the meantime, **[Redacted]** from the emerging technologies team and **[Redacted]**, head of the low carbon support unit, will continue to be on hand to help with any Saltire Prize queries you may have.

I have thoroughly enjoyed working with you all and have particularly appreciated your patience and staying power in this protracted process. You have all been very generous with your time and advice. I am confident that you will help us identify a positive way forward for the prize.

Warmest wishes,

[Redacted]

[Redacted]
Head of Emerging Technologies

Directorate for Energy and Climate Change
Scottish Government
5 Atlantic Quay
150 Broomielaw

Glasgow G2 8LU
[Redacted]

18. Saltire Prize - State of the Industry Report - Conference Call - links to reports - May 2018

Good Afternoon

Thank you for your responses to the doodle poll. I can confirm that the date & time of this call will be **Friday 4th May, 15:00-16:00**. Please find below an agenda & the dial in details for the meeting.

- SG Update on Energy Strategy
- Discussion on State of the Industry Report
- Next Steps

Intercall - Tom	
Toll-Free Dial-In Number:	**[Redacted]**
Conference code:	**[Redacted]**
Leader PIN:	**[Redacted]**

Please note that none of the following reports are yet in the public domain, therefore can these be treated as commercially confidential.

- The final draft of the CxC summary of the State of the Industry Report.

Wave and tidal energy: state of the industry summary

March 2018

Introduction

Despite substantial progress, the path to commercialisation for the wave and tidal industries is taking longer and proving more difficult than initially expected. In 2017, ClimateXChange commissioned a review of the current state and potential of the wave and tidal industries. The review was conducted by an industry consortium consisting of Caelulum Ltd., Aquatera Ltd. and Inflection Point Consulting and included a survey of industry developers.

There have been several reviews on wave and tidal energy development in recent years: these include UK reviews by Winskel (2007), Vantoch-Wood (2012), Jeffrey et al. (2013), Hannon et al. (2016) and Hannon et al. (2017). Of these, the latest Hannon et al. (2017) review is a comprehensive exploration of the UK's wave energy innovation support and industry development. There is also an EU review by Magagna et al. (2016), and recent

comprehensive national and international data and country reviews published by Ocean Energy Systems (IEA OES, 2017) and the International Renewable Energy Agency (IRENA, 2017).

The ClimateXChange-funded project aimed to complement this existing work to chart recent activity and views in the sector; to investigate the deployment pipeline and the market; to explore recent policy and political signals from UK and devolved administrations and the availability of market-pull instruments; and to set UK development in the global context.

Key Points

- The UK currently has ~9MW of tidal stream capacity and less than 1MW of wave energy capacity installed, though substantially more has been deployed and recovered over time.
- Except for the commercially active 6MW MeyGen project, most of these projects are "first of a kind" demonstration projects, testing single devices
- None of the developers surveyed for this report believe they had achieved a fully proven system in an operational environment
- The tidal stream sector is more advanced than the wave energy sector in terms of installed capacity and convergence of design
- There remains a diverse development pipeline of tidal stream and wave energy devices, both internationally and in terms of technological approaches
- As Hannon et al. (2017) notes, the UK has now improved its approach to innovation with the aim of delivering commercial devices, largely as a result of strong Scottish Government and EU support
- The developers surveyed stated that they had attracted a mixture of public and private funding, with investments from tens of thousands to tens of millions of pounds. They also acknowledged that they will need to attract significant further investment to deliver commercially viable machines. The ability to raise that funding, particularly from private sector, will depend on a clear route to market
- The levelised cost of energy (LCOE) for wave and tidal has barely fallen over the past 10 years, while other renewables such as wind and solar photovoltaics (PV) have seen dramatic falls in their costs
- The aim of delivering commercial marine devices is likely to face severe disruption from wider political developments such as Brexit's impact on EU RD&D funding; the political focus on the overall cost of energy; the UK Government's shift away from investing in marine renewables (other than offshore wind); and the absence of any "market pull" for wave and tidal stream projects in the UK

2. Recent Activity in the Sector

Active projects in the UK (meaning those installed or operating in the past 18 months) comprises approximately 9MW installed tidal stream capacity and less than 1MW installed wave energy capacity. Over 60% of this capacity has been installed over the past 18 months. Most of these projects are "first of a kind" demonstration projects, typically testing single devices; many are located at the European Marine Energy Centre (EMEC) in Orkney.

The exception to this is Atlantis Resource Limited's 6MW tidal stream MeyGen project, which is operating commercially, albeit with substantial EU and government funding support. Nova Innovation's 0.3MW turbine Shetland Array project and Scotrenewables

Tidal Power (SRTP) 2MW twin rotor machine operating at EMEC are also notable for their recent operational outputs.

There are no commercial wave energy projects in operation in UK (and indeed only one in Europe: the Ente Vasco de la Energia (EVE) Mutriku breakwater project in Basque region, northern Spain).

Feedback from the survey of current tidal and wave energy developers indicates that none feel they have achieved commercially proven technology in an operational environment[4]. This is not surprising since the first multi-machine deployments for tidal stream energy have only occurred in the past 18 months. In contrast, this milestone was achieved for wave energy convertors in 2008, but there are currently no multi-machine wave projects operating in the UK.

In terms of performance, quantity of electricity generated provides a good indicator of technical progress (which was recognised in the Saltire Prize formulation). To date, in terms of total electricity generation, the leading tidal stream energy project in the world was the Marine Current Turbines SEAGEN project in Strangford Loch, Northern Ireland. This generated ~10GWh over a period of six years from a 1.2MW dual turbine installation. For wave power, the leading project is the Ente Vasco de la Energia (EVE) Mutriku breakwater project in northern Spain, which has generated 1.3GWh over a period of five years using 16 x 18.5kW (296kW capacity) turbines and continues to operate.

Of current tidal stream energy machines, the MeyGen project was reporting nearing 2GWh generation (August '17 figures) having been installed in Nov 2016, so has the strongest annualised electricity generation – of ~2.5GWh - to date, with monthly output figures increasing after turbines were optimised. The Scotrenewables Tidal Power (SRTP) energy converter being tested at the European Marine Energy Centre (EMEC) in Orkney took the record in November 2017 for the fastest 1 GWh generated at EMEC.

These generation amounts remain well below the Saltire Prize target of 100GWh generated over a continuous two-year period. However, prototype projects are not necessarily run to achieve maximum annual electricity yield; instead they seek to prove the power curve and other operating characteristics (such as ease of installation;

[4] Technology Readiness Levels (TRL) provide a short-hand estimate of technology maturity, though slightly different definitions of TRLs are often used contemporaneously in review literature. For technology developments projects in the EU, the Horizon2020 definition is useful: https://ec.europa.eu/research/participants/data/ref/h2020/wp/2014_2015/annexes/h2020-wp1415-annex-g-trl_en.pdf Under this nomenclature, TRL 7 implies a system prototype has been demonstrated in an operational environment; TRL 8 implies a technology system that is complete and qualified; and TRL 9 is an actual system proven in an operational environment. Feedback from developers suggest no wave or tidal stream energy system is at TRL9.

control; reliability, etc.). We can expect to see improving electricity generation figures for currently operational projects.

3. Deployment pipeline and the market

Over 100 companies have or are testing wave or tidal stream energy convertors globally. There is a detailed review of these activities in the recently published OES 2017 Annual Report on ocean energy activities. Of these, about 50 are relevant to Scotland (by undertaking or planning to undertake activities in Scotland/UK or because they are significant internationally) and are reviewed in more detail in the industry review for ClimateXChange. The wave or tidal stream energy convertors of these companies are at different stages of testing (i.e. tank test, scale test, full scale, electricity generation, prolonged electricity generation in operational environments). Despite well publicised setbacks, this and other recent reviews show that innovation activity remains high in both tidal and wave sectors, with Wave Energy Scotland (WES) stimulating activity in component development and EU research and development funding supporting several technology systems.

As well as energy technology challenges, for marine renewables there are also issues of survivability in the marine environment, reliability (also dependent on accessibility and maintainability), ease of installation, operability and cost-effectiveness. Solving these challenges requires design and systems engineering at a high level, along with components able to fulfil these requirements. While careful design can eliminate or militate against the impact of component failure, ultimately only through full system testing can these elements be verified and optimised over time. In terms of the development pipeline, there are more tidal stream energy developers who are either generating or expecting to be generating electricity soon, supporting the notion that the tidal sector is more advanced and vibrant than the wave energy sector.

Most of the developers surveyed stated that they have attracted a mixture of private and public funding, with investments ranging from tens of thousands to tens of millions of pounds. They also acknowledged that they will need to attract significant further investment to deliver commercially viable machines. Half of those interviewed are targeting their company being profitable (defined as making a margin on equipment or electricity sales) within one to three years with the remainder being three to five years or more than five years.

Hannon et al. (2017) argues that *wave energy's* failure to reach market can, in part, be attributed to weaknesses in government and industry strategy, most notably a premature emphasis on commercialisation, and over-confidence and poor exchange of knowledge within the industry. This has led to poor performance against key innovation indicators, such as a fall in installed and rated capacity of wave devices and a lack of convergence around a

dominant device design, and a withdrawal of investors and major players from the sector. The recent concerted effort to learn from past policy mistakes, led primarily by the Scottish Government, has led to measurably better innovation performance.

Collectively, if all developers interviewed were to succeed, the estimated midpoint capital investment of those surveyed would be of the order of £300m in technology and project development, project build and operation, and other activities. Others argue much higher capital investment is required (e.g. Dickson and Winskel, 2018). However, the ability to raise such funding, particularly from the private sector, will depend upon there being a clear route to market.

4. Policy and political signals from UK and devolved administrations

Hannon et al. (2017) and the industry review for ClimateXChange note the continued positive signals from UK devolved administrations – and EU research and development funding - for wave and tidal energy development. But they warn that while the UK is now home to an innovation system much better placed to deliver commercial marine renewable devices, it is likely to face severe disruption from wider political developments. This includes Brexit's impact on EU RD&D funding; the UK's shift away from investing in wave energy; and the bundling of marine renewables with other, more mature and cheaper renewable technologies, such as offshore wind, in accessing the electricity market via Contracts for Differences.

Recent policy signals, such as the Scottish Government's Scottish Energy Strategy (2017) and the UK Government's decision to commission the Cost of Energy Review by Dieter Helm (2017), have also emphasised the increased political focus on (reducing) the cost of energy. Whilst significant progress has been made in both wave and tidal stream generation, the sector is still immature compared to other energy technologies, particularly onshore and offshore wind and solar PV energy generation.

Hannon et al. (2017), citing Bloomberg, show that the levelised cost of electricity[5] (LCOE) for wave and tidal energy has failed to fall over the past 10 years, while other technologies, such as offshore and onshore wind and solar PV, have seen dramatic falls in their LCOE. Solar PV has seen a fall of two thirds over this period and both wind and solar PV are increasingly cost-competitive against fossil fuel alternatives (even after noting system challenges of intermittent renewable electricity generation).

This industry review – drawing on a pre-defined list of answers – suggested that a major non-technical obstacle to progress wave and tidal stream energy was the "lack of an electricity market price that can sustain investments in projects", followed by lack of

[5] Levelised cost of electricity (LCOE) is an estimate of the assumed lifetime costs of an energy generation asset divided by the energy generated – in other words, it is a proxy measure for the price the energy generating asset must receive to break even in the market. The inherent assumptions in calculating LCOE need to be treated with care, particularly network costs and (back-up) capacity costs.

government prioritisation, strategy and support, and lack of investment. Developers surveyed here were disappointed in the decision to remove ring-fenced capacity of wave and tidal energy from electricity market auctions.

In contrast, recent debate about how to finance innovation in low carbon technologies (e.g. Mazzucato and Semieniuk, 2017) suggests that successful public policies that have led to radical innovations have been more about *market shaping and creating* through direct and pervasive public financing, rather than *market fixing*. In Scotland, a new Scottish National Investment Bank is planned, which could support such public financing (Dickson and Winskel, 2018). However, there is no clear "market pull" for wave and tidal stream energy projects in the UK at present or for the foreseeable future given current electricity market arrangements.

5. UK in a global context

The UK has the highest combined installed capacity of tidal and wave energy devices in the world, with over 60% of this capacity installed in the past year.

The picture presented in the development and deployment pipeline is diverse, both in its international nature and in terms of technological approaches to harness wave and tidal energy.

Scotland has factored in the plans of many of these companies; in part, this is due to:

- Scotland's wave and tidal resource availability
- WES funding programmes (for wave)
- The EMEC and other UK test infrastructure and the UK supply chain's strong track record
- Scottish academic facilities and capabilities
- EU funding available for testing (at EMEC or the Flowave testing tank in Edinburgh) from programmes such as Marinet and Foresea

However, this leading position may change if planned developments internationally come to fruition; or because of any loss of EU funding arising from Brexit; or in the absence of a clear strategy within Scotland/UK for a credible coherent pathway towards delivery of commercial devices (Hannon et al., 2017).

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- A link to the final State of the Industry report on Dropbox.
  [Redacted]

- A link to the website where you can find a downloadable version of the IEA Ocean Energy Systems Annual Report: an overview of ocean energy activities in 2017.
  https://report2017.ocean-energy-systems.org/

Kind Regards,

[Redacted]

[Redacted]

Low Carbon Infrastructure Transition Programme (LCITP)

5 Atlantic Quay, 150 Broomielaw, Glasgow

19. Official Sensitive: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email – 30/01/19

Dear Saltire Prize Committee Member,

As you will be aware the First Minister of Scotland, Nicola Sturgeon, made a commitment to the Scottish Parliament in February last year to review and rework the Saltire Prize with a view to ensuring that we continue to drive innovation and investment in the Scottish marine energy sector. Your support to-date has been invaluable in helping to shape options for a renewed support offering and we appreciate your patience in this protracted process.

To address the growing need to provide support for the marine energy sector, Scottish Ministers have agreed to launch a "**Saltire: Tidal Energy Challenge Fund**". This will replace the current "**Saltire Prize**" and provide a total of up to £10 million for tidal projects to be deployed in Scottish waters no later than March 2020.

You will note that the support is being limited to the tidal sector, reflecting the £30 million we have already committed to wave energy through the Wave Energy Scotland programme and our intention to continue supporting WES in its current form out to 2020/21. We appreciate that the challenge fund represents a refocusing of the aspirations set by the "Saltire Prize" over 10 years ago, however we are confident that this provides an appropriate and necessary vehicle to support the sector at this stage. This concentrated funding over the period 18/19 to 19/20 will be accompanied by further policy work to help the Scottish Government identify potential options for supporting the marine energy sector in the longer term. We would be pleased to take your views on this longer term approach, and the future role of the "Saltire Challenge Committee", as this policy work develops throughout 2019.

For now, we would be grateful for any comments on the draft guidance document attached, which outlines the eligibility and assessment criteria for the new fund. This document and details of the fund contained in this email are embargoed until launched.

We are eager to launch the fund as soon as practically possible and as such have arranged a conference call at **13:30-14:30 on Thursday 7th February** to discuss. I appreciate that you are all very busy apologise that this comes at very late notice.

We would appreciate if you could make the call, or alternatively provide any written feedback in advance.

I will shortly circulate a calendar invite for the conference call with joining details, however I would greatly appreciate if you could respond by return email to confirm if you are able to participate.

Kind Regards,

[Redacted] | Emerging Energy Technologies | Directorate for Energy and Climate Change | Scottish Government | Atlantic Quay | 150 Broomielaw |Glasgow G2 8LU | **[Redacted]**@Gov.scot | Tel: 0131 24(46053)/ 07469919113

Saltire: Tidal Energy Challenge Fund
Rules and Guidance

Contents

1. The aims of the Saltire: Tidal Energy Challenge Fund

The principal aim of the Saltire: Tidal Energy Challenge Fund is to drive innovation and incentivise investment in the Scottish tidal energy sector, supporting a pathway to long term cost reduction. The challenge fund aims to achieve the following:

- Stimulating/driving collaboration and knowledge sharing
- Acceleration of deployment and commercial development
- Securing benefits for Scotland
- Helping maintain Scotland's lead and promote Scottish facilities
- Strengthen investor confidence
- Joining up existing initiatives and facilities
- Innovations towards cost reduction
- Attracting wider participation
- Stimulating and supporting a Scottish supply chain

2. Who can apply?

Applications would be welcomed from individual organisations or from consortia of organisations and groups. In the case of a consortium, a lead body must be identified that will be responsible for all aspects of the management and delivery of the project, including accepting responsibility on behalf of the consortium for all offers of funding and any associated conditions of funding. All partners must be identified within the application form with a named contact provided that will be able to confirm commitment to the project.

Only projects that meet the essential eligibility criteria will be assessed for funding.

3. What type of support is available?

The award of funding may take the form of a grant, loan or other form of repayable assistance, and will be discussed with successful projects.

A total of up to £10 million is available through the fund. Applications are invited for funding of up to £5 million which must be match funded. Match funding must not be from other Scottish public sector grant funding sources.

Applications are restricted to one per organisation, including applications as part of any group or consortium.

4. What projects will be supported?

Projects must meet the following essential eligibility criteria:

Essential Criteria 1
The project must relate to the development of a material/technical innovation aimed at reducing the levelised cost of tidal energy. This may relate to the development or improvement of component parts, but must be relevant to improving the commercial viability of a tried and tested tidal energy device.

Demonstrating Eligibility
Applications should provide evidence to demonstrate the technical viability and performance of the tidal device to which the application relates. This should provide evidence of previous operational deployment of the tidal device. Applications should also highlight the commercial barriers of deploying the device in its current form and how the support requested through this fund would help to overcome these barriers.

Essential Criteria 2
The proposal must relate to the capital costs incurred by a tidal energy project.
Demonstrating Eligibility
Applications should provide a clear breakdown of the capital costs of the tidal device to which this application relates, highlighting the specific component(s) for which funding is being sought.

Essential Criteria 3
The proposal must relate to a project to be deployed in Scottish waters no later than March 2020 and be deliverable within clearly defined and manageable timelines.
Demonstrating Eligibility
Applications should demonstrate that the appropriate consents and licences are in place for the project, timescales, risk register and mitigating actions. The panel reserve the right to reject applications with unrealistic or unmanageable timescales.

Essential Criteria 4
The proposal should set out clearly the requirement for, and added value of, Scottish Government support including why funding from alternative sources is not possible or appropriate.
Demonstrating Eligibility
Applications should provide evidence to demonstrate that funding from alternative sources has been sought, providing feedback on why the project has not been successful in securing alternative funding.

Projects will be assessed against the following criteria:

Assessment Criteria 1
The specific innovation supported through this fund fits within a credible long term strategy for levelised cost reduction for tried and tested tidal energy devices.
Demonstrating Criteria
Applications should provide details of improvements to the commercial viability of devices to date. The application should also provide details of specific future activities, material or otherwise, that will complement the specific innovation funded through this call. The application should provide a clear breakdown of the current levelised cost, with a timeline showing how this can be reduced through the innovation supported in the project, and in the longer term.

Assessment Criteria 2
The project demonstrates partnerships and/or collaboration across the Scottish supply chain that compliment and supports successful project delivery.
Demonstrating Criteria
Applications should provide detail on project partnerships, highlighting the role of each partner and their involvement in the Scottish Supply Chain. Applications should also provide documentary evidence of support/involvement of project partners.

Assessment Criteria 3
The project demonstrates a positive social and economic impact to Scotland
Demonstrating Criteria
Demonstrating this criteria should relate to impacts arising from the specific projects/activity supported through this fund, and not to the long term potential of tidal energy as a whole. Applications should highlight specific impacts (e.g. creating/retaining jobs, or enhancing economic development in local areas).

Assessment Criteria 4
The proposal presents a detailed and credible plan for dissemination of successful learning points from the project for benefit of the wider sector.
Demonstrating Criteria
Applications should detail what information arising from the project will be available for dissemination across the marine energy sector, and should explicitly detail any information or learning points that is not intended to be released. The application should highlight the form of information sharing, for example through conference presentations, academic publications, industry bulletin etc. The application should also highlight how the lessons learned would benefit the sector beyond the tidal device to which the application relates.

5. What will not be supported?

Projects supported through the fund are limited to tidal energy projects. Applications for wave energy projects are not invited. A tidal energy device is defined as an installation which generates electricity from the flows of coastal waters caused by changes in tides.

The Scottish Government has to date committed more than £30 million to wave energy through Wave Energy Scotland and intends to support the programme in its current form out to 2020/21.

Projects that are not associated with tidal energy devices with evidence of previous operational deployment will not be supported.

6. How will my application be assessed?

Applications will be considered on a first come, first served basis and assessed against the criteria in section 4. Proposals should submit an application form and provide the following **supporting information:**

- Any previous feasibility or design or business case work that relates to the project, outlining the potential LCOE reduction from the proposed innovation.
- Projects should provide a financial model including a breakdown of component capital costs, clearly showing the costs to be supported through this fund.
- Projects should provide information on their supply chain, including Scottish companies involved, and what steps have been taken to promote competition in the supply chain for material or component parts (e.g. competitive procurement process, supplier engagement activity).
- If partners are involved in the project, documentation evidencing the project partnership. Projects should demonstrate and define any contractual requirements and how these will be managed (e.g. letters of support, MoU etc.)
- Documentation relating to the confirmed project site location with associated consents.
- An outline delivery programme and risk register.
- Any additional relevant information that supports the project as identified in the eligibility criteria above.

The Scottish Government reserves the right to request further information from applicants as required.

7. Evaluation and Award

SG officials will convene a panel to review applications. In addition, independent Technical and Financial experts may be appointed to support the evaluation process as appropriate. Potential conflicts of interests will be fully explored before appointment confirmed.

Your completed application will be assessed at a case conference by the panel who will agree whether your application satisfies the requirements for project support under the fund.

Decisions on support will be made by Scottish Ministers and are final. Feedback will be provided to all applicants.

8. Scoring

The scoring system is:

Quality of evidence provided	Scoring Methodology for Quality Criteria
1 Unacceptable	Inadequate response. Fails to demonstrate an ability to meet the requirement.
2 Poor	Response is generally poor. The response addresses some elements of the requirement but contains insufficient/limited detail or explanation to demonstrate how the requirement will be fulfilled.
3 Satisfactory	Response is relevant and acceptable. The response addresses a broad understanding of the requirement but may lack details on how the requirement will be fulfilled in certain areas.
4 Good	Response is relevant and good. The response is sufficiently detailed to demonstrate a good understanding and provides details on how the requirements will be fulfilled.
5 Excellent	Response is completely relevant and excellent overall. The response is comprehensive, unambiguous and demonstrates a thorough understanding of the requirement and provides details of how the requirement will be met in full.

Applicants that score between 50% and 69% will be offered conditional support on the basis that the project provides all further clarification/documentation requested by the scoring panel. Projects that score 70% or more pass the appraisal and will be recommended for funding.

NB: If an application scores satisfactory on all the criteria, it will not meet the pass mark for support. In such cases, it may be necessary to seek clarification if the applicant is considered borderline and potentially worthy of supporting.

Decisions on support will be made by Scottish Ministers and are final. Feedback will be provided to all applicants.

9. State Aid

State Aid is a European term which refers to forms of public assistance, given to undertakings on a discretionary basis, which has the potential to distort competition and affect trade between Member States of the European Union.

The State Aid rules are set by the EC and comprise various articles of the Treaty on the Functioning of the European Union (TFEU), Regulations, Frameworks and Guidelines - which set out what aid *can* be given and under which circumstances. The EC governs Member States' compliance with these rules and many aid measures must be notified to the Commission for approval.

State Aid rules will apply to any funding offered through this project and will be discussed with successful applicants.

The European Commission have sole competence on the presence of State Aid however it is the responsibility of the Member State to ensure compliance of this. Any queries on this topic must be made to the funding body (Emerging Energy Technologies Team - Email: Emerging.Energy.Technologies@gov.scot / Postal address: Emerging Energy Technologies, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow G2 8LU) in the first instance who will then liaise with State Aid colleagues where appropriate.

10. Rules of the programme

The following rules form part of the agreement between your business and the Low Carbon Infrastructure Transition Programme, therefore, please ensure that you fully understand and accept the following:

- the lead organisation must ensure that proper and early warning is provided to the Emerging Energy Technologies Team of any major problems that may be developing with the organisation/project;
- the lead organisation must agree with the Emerging Energy Technologies Team the nature and frequency of returns needed to keep it adequately informed of the project's situation;

11. Information to help you apply

How do I apply?

To apply for support from the Saltire: Tidal Energy Challenge Fund you need to follow these steps:

- read carefully the eligibility criteria at no.4 of these guidance notes
- complete all sections of the Saltire: Tidal Energy Challenge Fund application form
- ensure you have read and understood the privacy policy
- ensure a senior member of the lead organisation, such as Chief Executive or Director, also supports the application by ticking the box and providing his/her name and position in the form
- use the checklist to ensure you have provided the required documentation
- submit the application form to Emerging.Energy.Technologies@gov.scot

12. What happens next?

- Once your completed application has been received it will be assessed by a panel convened by SG officials at a case conference.
- If your application is successful you will contacted by the Emerging Energy Technologies Team to agree the terms and form of funding.
- If your application is unsuccessful you will receive feedback from the assessment panel and all possible efforts will be made to direct your project towards a more appropriate support mechanism.

13. Changes in circumstances

Any changes in circumstances, which would affect your project's eligibility to apply to be supported through the Saltire: Tidal Energy Challenge Fund, must be reported to the Emerging Energy Technologies Team immediately. Failure to do so may lead to the application being rendered invalid and support to be withdrawn.

14. Contact Information

If applicants have any questions or suggestions regarding our privacy policy, please contact us at:
Email: Emerging.Energy.Technologies@gov.scot

Postal address: Emerging Energy Technologies, 4th Floor, 5 Atlantic Quay, 150 Broomielaw, Glasgow G2 8LU

20. RE: Saltire Challenge Committee Meeting – 07/02/19

Dear All,

Thank you all very much for your time this afternoon, we found the discussion, and the written feedback provided in advance, very helpful in shaping our approach. The Saltire Committee has, and continues to be, a valuable source of global expertise and perspectives in our journey to support an emerging sector. We appreciate your forbearance, patience and willingness to continue contributing to our process. Following feedback from today, SG will give further consideration to the future role of the Committee, including the possibility of arranging a further meeting in person.

Again, we apologise for the process and rushed nature of engagement with the committee on the Challenge Fund proposal. We appreciate the time you have dedicated to this at such short notice.

I have attached an updated draft of the Tidal Challenge Fund guidance note and criteria which hopefully addresses some of the specific concerns raised. I have also attached a note from the meeting today with further feedback on the written comments we received in advance.

Our intention is to proceed with the launch of the tidal challenge fund this weekend, with guidance forms and documentation to be made available to applicants early next week. I would be grateful if you could provide any further feedback by noon GMT tomorrow (08/02).

Kind Regards,

[Redacted]

[Redacted] | Emerging Technologies Team Leader | Directorate for Energy and Climate Change | Scottish Government | Atlantic Quay | 150 Broomielaw |Glasgow G2 8LU | **[Redacted]**@Gov.scot**[Redacted]**| Tel**[Redacted]**/ **[Redacted]**

Saltire Prize Committee Meeting

Conference Call 07/02/2019 13:30-14:30

Purpose: To provide feedback on the Scottish Government proposal and assessment criteria to launch a "Tidal Energy Challenge Fund"

Agenda

1. Welcome
2. Background to the Committee Update Session
3. Market Need for Tidal Challenge Fund
4. Open discussion on Tidal Challenge Fund
5. Timings and Next Steps

Attendees:

[Redacted]; **[Redacted]**; **[Redacted]**; **[Redacted]**; Sue Kearns; **[Redacted]**; **[Redacted]**; **[Redacted]**

Witten feedback we have received to date:

- do not think that the essential criteria are what I would put my money behind if I wanted to drive down costs in the tidal sector.
  SG Response: Our analysis of the sector through the Scottish Marine Energy working group has identified a number of innovations which could support near term cost reductions.

- **[Redacted]**Concerned about delivery timeline – requirement to be in water by 2020 – may restrict competitiveness
  SG Response: We have a number of funding requests from the sector and believe that this fund will provide us with an opportunity to support the sector in a strategic, fair and transparent manner. The funding criteria outline that we are looking to support innovation around tidal energy devices that have a history of operational deployment. As such we are confident that there are project which will benefit from this funding and can be delivered within these timescales. Additionally, deadlines have been set to ensure this fund complements, and helps unlock European sources of funding currently available, which may not be accessible post UK exit from the EU.

- an essential criterion that the same proposal must have been rejected by someone else seems very puzzling.
- **SG Response:** We have set essential criteria 4 to ensure that the funding provided through this fund is gap funding, and that sources of private sector or alternative commercial sources of funding are prioritised above public funds.

Notes from meeting

1. Scottish Government (SG) provided further context for the Fund proposal, including the current investment climate, level of international activity and competition, and the scale and impact of support for wave energy in Scotland.

2. SG's own analysis as well as intelligence received from industry provides it with confidence both that the Fund provides an appropriate approach to supporting the current needs of the tidal sector in Scotland and that it will contribute towards meeting longer-term strategic objectives.

3. The Committee's collective expertise and significant contribution to date were acknowledged and an apology was offered for the process and rushed nature of engagement with the Committee on the Fund proposal.

4. The Committee acknowledged the challenging circumstances surrounding the Saltire Prize and need for SG to take forward the proposed challenge fund to support the current needs of the sector.

5. The Committee highlighted the knowledge and experience of members across the committee and remain willing to provide expertise where it is considered valuable. SG will give further consideration to the future role of the Committee, including the possibility of arranging a further meeting in person.

6. Concerns were raised over some of the wording in the draft Guidance for the tidal challenge fund; in particular the references to "tried and tested" technology and "component parts".

7. SG to re-draft the relevant sections of the Guidance and circulate the revised document later today. Committee members kindly agreed to provide comments on the revised paper either today or tomorrow (Friday).

8. SG to provide the Committee with an outline in due course of its proposed approach to procuring technical expertise to assess funding bids.

9. SG confirmed its intention to announce the launch of Fund this weekend, subject to necessary clearance being provided.

10. SG agreed to provide a link to the recent announcement about the next phase of the Wave Energy Scotland programme.

From: **[Redacted]**
Sent: 06 February 2019 11:41
To: **[Redacted]**@exploration.ventures' <**[Redacted]**@exploration.ventures>; **[Redacted]**@thecommonpool.com' <**[Redacted]**@thecommonpool.com>; **[Redacted]**@emec.org.uk' <**[Redacted]**@emec.org.uk>; **[Redacted]**@buglassenergyadvisory.com' <**[Redacted]**@buglassenergyadvisory.com>; **[Redacted]**@hw.ac.uk' <**[Redacted]**@hw.ac.uk>; **[Redacted]**@btinternet.com' <**[Redacted]**@btinternet.com>; '**[Redacted]**@pure-energy-partners.com' <**[Redacted]**@pure-energy-partners.com>; Kearns SJ (Sue) <Sue.Kearns@gov.scot>; **[Redacted]** <**[Redacted]**@gov.scot>;[Redacted]<**[Redacted]**@gov.scot>; **[Redacted]** <**[Redacted]**@thecommonpool.com>
Subject: RE: Saltire Challenge Committee Meeting

All,

Just to confirm that we intend to go ahead with this call tomorrow. Thanks to those of you who have confirmed attendance and those who have provided written feedback.

Look forward to the discussion tomorrow.

Kind Regards,

[Redacted]

-----Original Appointment-----
From: **[Redacted]**
Sent: 30 January 2019 18:34
To: **[Redacted]**; **[Redacted]**@exploration.ventures'; '**[Redacted]**@thecommonpool.com'; **[Redacted]**@emec.org.uk'; '**[Redacted]**@buglassenergyadvisory.com'; **[Redacted]**@hw.ac.uk'; **[Redacted]**@btinternet.com'; **[Redacted]**@pure-energy-partners.com'; Kearns SJ (Sue); **[Redacted]** **[Redacted]** **[Redacted]**
Subject: Saltire Challenge Committee Meeting

When: 07 February 2019 13:30-14:30 (UTC+00:00) Dublin, Edinburgh, Lisbon, London.
Where: Conference Call

Apologies – updating the meeting to the correct time.

Hi All,

As discussed in my previous email (attached), conference call to discuss the Saltire Tidal Energy Challenge Fund. Dial in details below. I will lead from Edinburgh.

Toll-Free Dial-In Number:	**[Redacted]**
Std International Dial-In Number:	**[Redacted]**
Conference code:	**[Redacted]**
1. Provide participants the date and time of the call, your dial-in number and your conference code. 2. At the specified time, dial your Reservationless-Plus dial-in number, then enter your conference code, followed by #. 3. When prompted, press *, then enter your leader PIN, followed by #. 4. Your participants join the conference by dialling your number and entering the conference code.	
Leader PIN:	**[Redacted]**

Kind Regards,

[Redacted]

21. Re: Saltire Challenge Committee Meeting – 31/01/19

Dear **[Redacted]**

thanks for your email. I'll be happy to join, though unfortunately cannot do a call on 7th. I'm free much of next week apart from Thursday and Friday afternoon, though.

[Redacted] Happy to discuss in further detail on the call, if it's possible to arrange for another time

Best regards

[Redacted]

22. RE: Official Sensitive: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email – 31/01/19

Unfortunately I cannot do a call at the time proposed next week, **[Redacted]**

[Redacted]

23. RE: Official Sensitive: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email – 31/01/19

And further to my previous email **[Redacted]**

[Redacted]

24. FW: Unofficial from [REDACTED]: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email – 31/01/19

[Redacted]

From[Redacted]<**[Redacted]**emec.org.uk>
Sent: 04 February 2019 10:57
To: [Redacted]
Subject: FW: Unofficial from [Redacted]: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email

[Redacted]

Following our conversation on Friday I have just sent the mail below.

I expect I will get reactions from most and can filter them.

However it would be helpful if we could have a quick call. Questions I have:

1. Is there a time driver on the announcement of support?
2. What IS the plan? I get that you want to get some support in place for local initiatives, but as I see it there are 4 Scottish players in town: **[Redacted] [Redacted]**What latitude do we have to tailor the announcement? **[Redacted]**

We could do a call with the group, but you and I need to do some pre-work. It will also need to be late in the day as several of the members are in the States.

Happy to speak,

[Redacted]

[Redacted]

[Redacted]

Tel: **[Redacted]**Mob: **[Redacted]**

www.emec.org.uk | Blog | Facebook | Twitter | YouTube | LinkedIn

From: [Redacted]
Sent: 04 February 2019 10:49
To:
[Redacted]exploration.ventures**[Redacted]**@buglassenergyadvisory.com**[Redacted]**
Subject: Unofficial from **[Redacted]**: Saltire: Tidal Energy Challenge Fund - Saltire Prize Committee Email

All,

Following up from the flurry of traffic about the unexpected announcement from **[Redacted]** I had a word on Friday with **[Redacted]** who is in the post **[Redacted]** occupied.

[Redacted]

On the plus side **[Redacted]** was keen to stress that **[Redacted]** they remain keen to support the sector and this seemed to be one way to do it. Money has gone into Wave Energy Scotland and the tidal sector has been unsupported for some time. Notwithstanding that there has been considerable progress in the past year with Orbital Marine Power (previously called Scotrenewables) delivering 7% of Orkney's electricity week in week out for much of last year. However that was the result of pre-existing support rather than present policy.

I feel that the civil servants are keen to do things to help the sector. **[Redacted].**

In terms of what can be done: I will have some further conversations to find out what is planned and solidly decided and whether our input could be useful. I think a call will be helpful, so I will see what can be arranged.

Stand-by, but feel free to come back to me privately if that would be useful.

[Redacted]

[Redacted]

[Redacted]

Tel: **[Redacted]** Mob: **[Redacted]**

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