

AUSTRALIAN OCEAN ENERGY GROUP

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Director, Clean Energy Technology Innovation
Department of Agriculture, Water and the Environment

Via email: offshorewind@environment.gov.au

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Australian Ocean Energy Group (AOEG) response to Offshore clean energy infrastructure regulatory framework (January 2020).

Executive Summary

As noted in the *Annex IV 2016 State of the Science Report: Environmental Effects of Marine Renewable Energy Development Around the World*, “The consenting process is still regarded as a barrier for the sector to scale up and become cost-competitive with other forms of electricity generation. Uncertainties about the application of environmental legislation can prolong consenting processes, adding costs, delays, and significant uncertainty.”

The Australia Ocean Energy Group (AOEG) therefore supports both the intent and the principals outlined in the *Offshore clean energy infrastructure regulatory framework – Discussion Paper 2020*. Within the broad outline of the approach proposed by the Commonwealth’s Discussion paper, AOEG would like to comment on four areas associated with Non-Commercial activities;-

- Ministerial Declaration of Areas
- Environmental Assessments
- Co-location with Existing Offshore Infrastructure
- Allowance of Off-take Agreements

Each of these topics is explored further in the submission below. AOEG would appreciate the Commonwealth’s consideration of each issue raised as they may have a material impact on the sector’s ability to attract capital in any pre-commercialisation phases. Long, complex and overly-expensive regulatory regimes are a strong disincentive to early-stage investment capital.

Australian Ocean Energy Group (AOEG)

The Australian Ocean Energy Group (AOEG) is an Industry-led cluster formed to accelerate ocean energy technology development in Australia as a commercial, stable, low carbon energy source, suitable for multiple industrial and community applications. The development of capabilities in this sector will support energy independence, decarbonisation and job creation, both domestically and internationally.

Our members cover the full supply chain from research institutions to technology and project developers, as well as a range of service and equipment suppliers and end-user segments. A list of members is provided as **Attachment A**

There are many forms of ocean energy resource (tidal, wave, current), thermo or osmotic, as well as many different kinds of ocean energy devices. Nevertheless, AOEG believes it is possible to provide a simplified, risk-based policy framework which can both protect the environment and shared users, whilst also supporting the accelerated testing and development of ocean energy devices.

Ocean Energy

The International Renewable Energy Agency (IRENA) has noted;- “The potential of oceans as an energy source is staggering – more than sufficient to meet global electricity demand well into the future. Yet the contribution of ocean energy to the world’s energy mix remains very small, with key technologies still in development and demonstration phases.” (IRENA Ocean Energy Report 2014)

Fulfilling the potential of ocean energy requires continued investment into technology development, national test sites, supportive industry policies and continued engagement across related supply chains, such as off-shore wind, oil & gas industry, aquaculture, advanced manufacturing and many more.

National governments around the world have realised the potential for ocean energy, especially as ocean energy is far more predictable than solar/wind. Tides are predictable over all time-frames, and waves have a forecast horizon up to three times more than wind. (CSIRO: Ocean Renewable Energy, 2012)

Australia has numerous competitive advantages which, if supported by relevant policy settings, could see Australia secure a global market leadership position in this sector.

Australia, the world’s largest island, has over 25,000 kms of coastal area and the third largest Exclusive Economic Zone with over 80% being classified as offshore, beyond two nautical miles from the coast and subject to oceanic waves, tidal currents and wind.

With the world's most powerful wave and tidal resources available, ocean energy development in Australia means our surrounding seas and oceans offer enormous potential to deliver power (energy and hydrogen), heating and cooling, drinking water and other products (oxygen).

This potential is multiplied when partnered with other major infrastructure projects, such as off-shore solar/wind farms or deep-sea oil and gas platforms.

Comments on Proposed Approach

Ministerial Declaration of Areas

AOEG would be grateful for clarification on the process envisaged to support proactive requests from industry to consider a specific area for Declaration.

For areas of possible interest to the Commonwealth, AOEG understands the current proposed approach is for the Minister to declare an area available for potential commercial and/or non-commercial activities and to then undergo a period of public consultation before calling for licence applications.

For large areas, overlapping with sensitive marine life, commercial fishing or other existing activities, we understand the importance of a more extensive evaluation and consultation system.

However, we would ask the Commonwealth to consider a triage process or a more streamlined Declaration process for low-risk Non-Commercial Areas. Low-risk criteria which could be considered in identifying potential such areas might include considerations such as:

- Small Ocean Blocks (2 miles X 2 miles)
- No existing commercial or non-commercial activities
- Not in the pathway of migrating marine life or shipping channels
- Installation of less than 20MW of capacity or fewer than 5 devices
- Transmission networks not required/already exist with a small connection required or will connect to industrial zones on-shore

For situations like this we would ask the Commonwealth to consider an automatic declaration of a non-commercial area, subject to suitable environmental assessments.

Should a later interest develop in declaring the area open for commercial interests (feasibility licences/commercial licences), this can progress as per the proposed process, including consultation with any Non-Commercial Licence holders in the area.

AOEG would also request the Commonwealth outline the process by which industry can make proactive requests to the Commonwealth for the declaration of a specific area.

Environmental Assessments

Regulatory regimes which fail to differentiate between low, medium and high-risk activities can often have the perverse outcome of ensuring only larger companies, interested in larger scale activities, are able to invest in the regulatory approval process. With ocean energy, much of the early technology development risk sits with smaller companies utilising 1 – 5 devices at a time, as such AOEG would support the Commonwealth's stated principal of a risk-based approach to environmental assessments.

In addition, impact assessments for most projects typically require consideration and/or input from many different government agencies. By standardising the assessment and/or performance requirements of each agency, in advance of any applications, could significantly reduce uncertainties, timelines and costs associated with assessment processes, for both project proponents and government agencies.

As a result, AOEG asks the Commonwealth to further support their risk-based approach by standardising the types of assessments required for non-commercial activities.

Many jurisdictions have standardised assessment frameworks in place. This typically involves the preparation of some form of Preliminary Environmental Assessment (PEA) in which the nature and scale of the activity is described, as well as the location of the activities. Then, against a standardised set of requirements (noise, emissions, biodiversity etc) a proponent outlines the likely impacts of the activity and the evidence-base/rationale used in making these predictions. It is possible through this process to also explain how impacts might be low, negligible or nil.

If PEA's are made public, these reports can also provide a ready source of accumulated data and information on the marine environment for future industry, community and Government benefit.

Where the Regulator agrees impacts outlined in the PEA are low, negligible or nil, AOEG asks the Commonwealth to consider issuing a licence as quickly as possible, without a public exhibition period. If a public exhibition period is mandated, AOEG would request that the period be limited to a statutory period of no more than 14 calendar days.

Some of the standard areas worth considering might include:

- Collision Risk (marine life)
- Benthic Habitats & Reefing Patterns
- Navigation Risk (shipping)
- Noise
- Vibration/Electromagnetic Fields
- Emergency Spill (hydraulic fluids)
- Water Quality Impacts
- Sedimentation Impacts

Co-location with Existing Offshore Infrastructure

Ocean energy devices may be suitable for attachment to existing offshore infrastructure, such as oil and gas platforms. Typically, discussions with owners of existing infrastructure about the experimental deployment of ocean energy devices off their structures tends to be bilateral in nature, as the device must suit the platforms specific needs (physical layout and environment, operational safety requirements, energy only focus or energy plus additional benefits such as fresh water etc)

Noting that the use of clean energy devices in the offshore environment should be licenced, AOEG would request the Commonwealth consider either:-

- enabling ocean energy devices attaching to existing infrastructure to proceed under the existing Development Consent of the offshore operator, or;
- a Non-Commercial Licencing regime for small-scale ocean energy installations (20MW or less), which does not first require the declaration of the overlapping area, if the devices are to be installed on existing offshore infrastructure.

Allowance of Off-take Agreements

AOEG would request any Non-Commercial Licencing regime incorporate an allowance for off-take arrangements, such as Power Purchase Agreements (PPAs.)

This is because even for demonstration projects (single device or small arrays), the securing of a regular revenue stream can present a significant under-writing of technology development costs. Devices typically go through several evolutionary developments before commercialisation, as such, an off-take arrangement could mean the difference between a successful project and an unsuccessful project.

PPA's or indeed, other off-take arrangements for beneficial outputs like, fresh water or oxygen, can provide a small benefit to the owners of the infrastructure or space in which devices are being tested, while also providing the developer with a source of revenue to finance development activities. One such arrangement already in existence is a PPA with the Australian Defence Force on Garden Island, Western Australia associated with the deployment of a wave energy device.

The ability to include such arrangements in Non-Commercial Licence arrangements would make a material difference to most licence holders.

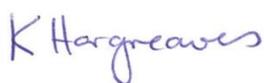
In recognition there would need to be a threshold limit for any such arrangements, we would suggest a threshold limit which ties in with any maximum limit imposed on non-commercial licences, for example 20MW. This threshold would align with the low-risk criteria also mentioned earlier in this submission for Commonwealth consideration.

In summary, we support the Commonwealth's desire to reduce uncertainty, complexity and delays in the development of clean energy infrastructure in Commonwealth waters, including Australia's Exclusive Economic Zone.

With some consideration of the issues raised in this submission, AOEG is confident the Commonwealth's regime can provide an environmentally responsible, timely and supportive regime for the commercialisation of ocean energy technology and the decarbonisation of our economic activities.

Please don't hesitate to contact us should you require any clarification of the points raised.

Yours sincerely



Kylie Hargreaves
Chair
Australian Ocean Energy Group

Enclosed/ Attachment A – AOEG Consortium Members *as at 1 March 2020*

ATTACHMENT A
AUSTRALIAN OCEAN ENERGY GROUP (AOEG)
CONSORTIUM MEMBERS *as of 01 March 2020*

Company	Consortium Member Name & Position	Company or Organisation Type
Aquatera	Gareth Davies, Managing Director & Ian Hutchison, Chief Operating Officer	Environmental services and products specialising in the ocean energy sector
Atratus Renewable Consulting	Simon Troman, Principal	Consulting Firm
BMT Commercial Australia Pty Ltd	Chris Shearer, Senior Mechanical Engineer <i>[Primary representative]</i> David Rissik, Head of Business Development & Climate Change Adaptation	International design, engineering, science and risk management consultancy.
Bombora Wave Energy	Sam Leighton, CEO	Australian wave energy technology developer
Capacitus Consulting	Luke Murray, Principal	Ocean energy design engineering consulting
Carnegie Clean Energy	Jonathan Fievez, CEO & Brigid Jay, Business Development Manager	Wave energy technology developer
Climate-KIC Australia	Chris Lee, CEO	Climate change knowledge innovation community (NGO)
Hargreaves International	Kylie Hargreaves, Principal	Consultant - government and policy specialist.
Individual	Forbes Peter	Former naval electrical engineering officer providing support for Australia's fleet of Submarines
INGINE Inc.	Fanny Sauvignon, Program Manager	Wave energy technology developer

Company	Consortium Member Name & Position	Company or Organisation Type
MAKO Tidal Turbines	Douglas Hunt, Managing Director	Tidal technology development company
National Energy Resources Australia (NERA)	Francis Norman	Commonwealth Growth Centre
Renewable Capital Pty	Karl Schutte, Principal	M&A, Investment and Capital Services Firm
SABELLA SAS	Jean Christophe ALLO, Commercial Director and Marlène Moutel, Business Development Engineer	Tidal technology developer
Wave Energy Research Centre (WERC)	Wiebke Ebeling, Manager	State-supported ocean energy technology research centre
Wave Swell Energy	Tom Denniss, CEO	Wave energy technology developer
Wolfe and Co Solutions	Mike Straughton, Director	Consultant
University of Adelaide, School of Mechanical Engineering	Ben Cazzolato, Professor	University
University of New South Wales (UNSW), Water Research Laboratory	Francois Flocard, Principal Engineer	University
University of Queensland, School of Civil Engineering	Remo Cossu, Senior Lecturer	University
University of Tasmania, Australian Maritime College	Jean-Roch Nader, Lecturer/Research Fellow	University
University of Western Australia, Offshore Foundation Systems	Christophe Gaudin, Professor and Deputy Director	University