



A Year in Review and 2021 Sneak Preview

14 December 2020

Program Topics

ABOUT AOEG

2020 HIGHLIGHTS
Activities,
programs and
progress

THE WAY FORWARD
Ocean Energy Market
Development
Initiative

An aerial, top-down view of a beach. The image shows the ocean with waves breaking onto a sandy shore. The water is a deep teal color, and the foam of the waves is a light, creamy white. The sand is a warm, golden-brown color. The waves are breaking in a rhythmic pattern, creating a sense of movement and energy. The overall composition is centered, with the text 'ABOUT AOEG' overlaid in the middle.

ABOUT AOEG

About Us

Australian Ocean Energy Group (AOEG) is an industry-led cluster. We formed in 2018 to facilitate collaboration and innovation of the ocean energy industry.

Our primary aim is to accelerate the commercialisation of Australia's ocean energy as the next frontier in low carbon generating capacity and add ocean energy to Australia's energy resource mix.



**AOEG'S CORPORATE VIDEO REFLECTS OUR VISION
FOR AUSTRALIA'S OCEAN ENERGY FUTURE.**



**Our members
are the leading
source of
knowledge and
solutions to
make ocean
energy happen.**

Our mission, vision & values



Our mission

The Australian Ocean Energy Group exists to accelerate commercialisation of Australia's ocean energy as the next frontier in low carbon generating capacity and add ocean energy to Australia's energy resource mix.

Our vision

AOEG's vision is to mobilise the power of a cluster, and its foundations of innovation and collaboration, to generate market demand for ocean energy.

Our value proposition

Unlike the other parts of the world where there are government and support programmes exist to nurture the ocean energy industry, that type of support does not exist in Australia. AOEG was established to serve as a catalyst to establish and build an ocean sector in Australia.

AOEG has built an ocean energy 'ecosystem' where none previously existed.

AOEG intends to move from a 'coordinating organisation' to one that is providing the mechanism to bring the end users (markets, suppliers, technology providers) together to prove commerciality and generate understanding what the value offering is.

Why a cluster



A cluster is a value creation network, it connects the right people, in the right place at the right time to drive innovation and exponential growth in a particular industry. This leads to new opportunities that can overcome barriers and scale to achieve successful industrial sector.

Cluster structures, like ours, provide effective means to innovate solutions to challenges in ocean energy development.

Your engagement with AOEG is essential to creating and upholding a strong, innovation-driven, entrepreneurial ecosystem.

OUR APPROACH

Increase Collaboration

Apply Innovation

Expand Market Opportunities

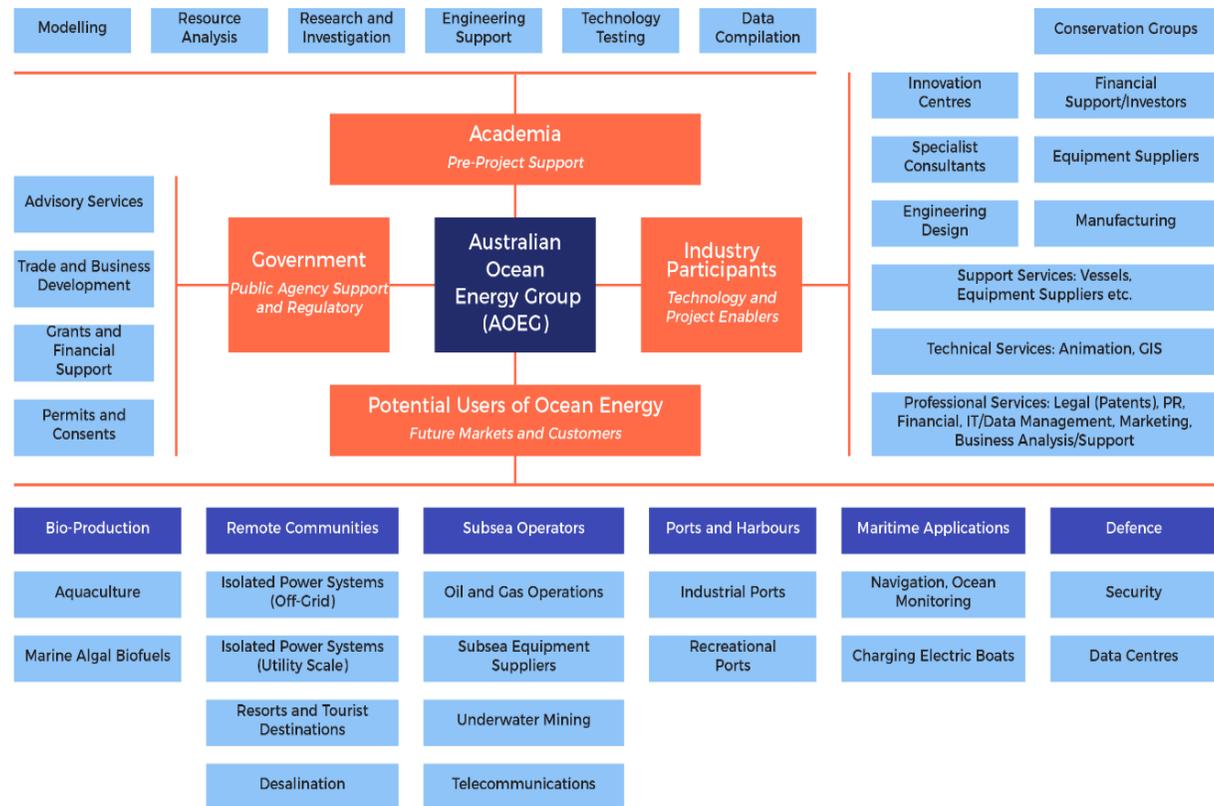
Engage with Government

Inform and Connect

Reduce Costs & Increase Efficiencies

What we are building

As a cluster, AOEG is building formal and informal networks that include SMEs and large companies, entrepreneurs, innovation intermediaries, universities and research institutions, investors, professional services and governments, as illustrated here.



Our members

AUSTRALIAN
OCEAN ENERGY
GROUP

Technology developers



Organisations and non-for-profits



AOEG
FOUNDING
SPONSOR



AOEG
FOUNDING
SPONSOR



Academia & Research



Consultants and individuals

ALLESANDRO
TOFFOLI

ALEX
OGG



DAN
ETHERINGTON

DARREN
POWELL

FORBES
PETERS

GREG
BUTLER

HARGREAVES
INTERNATIONAL

KEITH
CALVERT



Our Objectives



Increase Collaboration

We're working together to strengthen partnerships leading to collaborative work amongst diverse organisations and other industrial sectors to accelerate development of ocean energy projects in Australia.

Apply Innovation

Our group will help translate good ideas that lead to value for the industry. We're collaborating on new ways to reduce the time from concept to commercialisation as well as reduce barriers for ocean energy development projects.

Expand Market Opportunities

We're providing a platform for business to business, industry to industry and cluster to cluster collaborations and extending the global reach for Australian Ocean Energy Group partners. Ocean energy has synergies with offshore oil and gas and subsea sectors, defence, maritime operations, and island communities.

Engage with Government

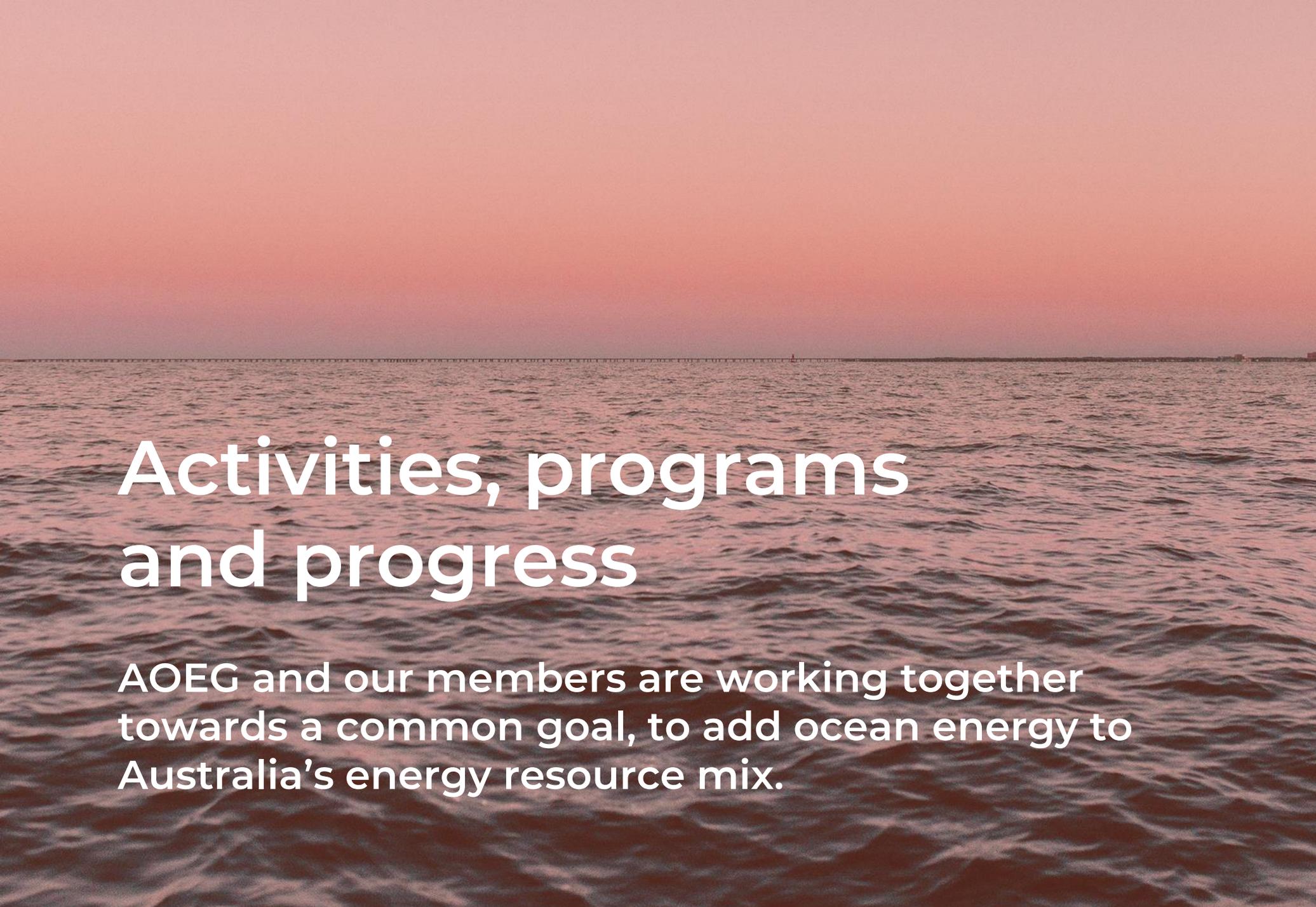
Our works aim to educate, engage and gain policy and regulatory support for ocean energy development and its role in the country's renewable energy portfolio.

Inform and Connect

One of the main ways our group can help accelerate innovation in the ocean energy sector is through assertive communication and engagement. We aim to generate a broad base of stakeholder support for ocean energy development while expanding active involvement in the cluster.

Reduce Costs and Increase Efficiencies

Reducing costs and improving efficiencies is an important factor in achieving success in the ocean energy sector. We aim to achieve this through shared resources, expanded program engagements amongst all participants and focused knowledge transfer.

A sunset over the ocean with a long pier in the distance. The sky is a gradient of orange and red, and the water is dark with small waves. A long pier extends across the horizon.

Activities, programs and progress

AOEG and our members are working together towards a common goal, to add ocean energy to Australia's energy resource mix.

Our journey (so far...)

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July 2018

NERA provides start-up funding support to form and launch an ocean energy cluster. AOEG completes business plan.

CLIMATE KIC AUSTRALIA sponsors AOEG, supporting its growth and development.



2018



2019



January 2019 AOEG formally launches as new cluster

Throughout 2019 Executive Committee formed to help grow organisation, identify & develop projects and increase membership. Ocean energy was introduced to Australian stakeholders (eg, government, organisations, etc.)

December 2019 Ocean Energy Market Development Summit – AOEG's signature event



2020

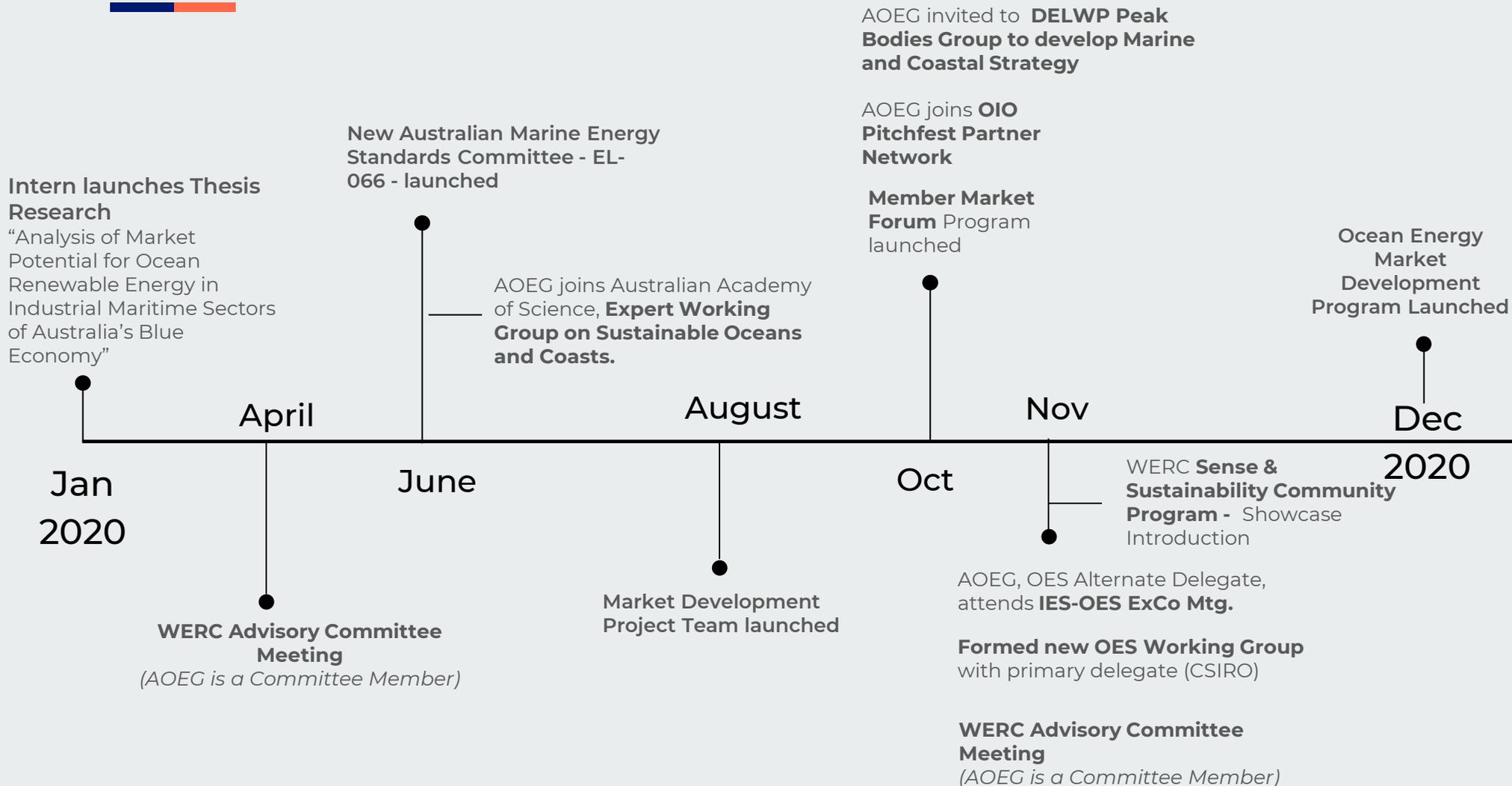


January – December 2020 AOEG shifts from a 'coordinating organisation' to one that will provide the mechanism to bring the end users (markets, suppliers, technology providers) together to prove commerciality and generate understanding what the value offering is.

Activities, programs and progress

Key Milestones

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AOEG Activities, Programs & Progress *continued....*

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OCEAN ENERGY
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POLICY CONTRIBUTIONS

Victorian Marine & Coastal Policy

Tasmanian Renewable Energy Action Plan

Offshore Clean Energy Regulatory Framework

WA Infrastructure Strategy

Australian Technology Investment Roadmap

External Communications

Numerous external presentations & engagements generating awareness about Australia's ocean energy sector. A sample includes:

- Ports & Harbours Association Environmental Committee
- Association of Petroleum Engineers
- TCI Oceania
- 3 panel presentations
- Industry newsletters
- New member campaign

\$175,000

NERA funding contribution to **launch OE Market Demonstration Showcase in 2021**

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Member Market Forums

- Tom Denniss, Wave Swell
- Sam Leighton, Bombora
- Rob Flynn, EMEC

Blue Economy CRC

Direct engagement in BE-CRC studies

- Regulatory and Policy
- Offshore Sustainable Power Systems
- Supply Chain
- Integrity and Ethics

Additional BE-CRC engagements:

- Project Member, Mooring Tensioner (led by Carnegie)
- Member, Participants Committee
- Member, 2nd Annual Participants Summit Planning Committee





Market development and innovating the future

AOEG's crucial role in ocean energy market
development



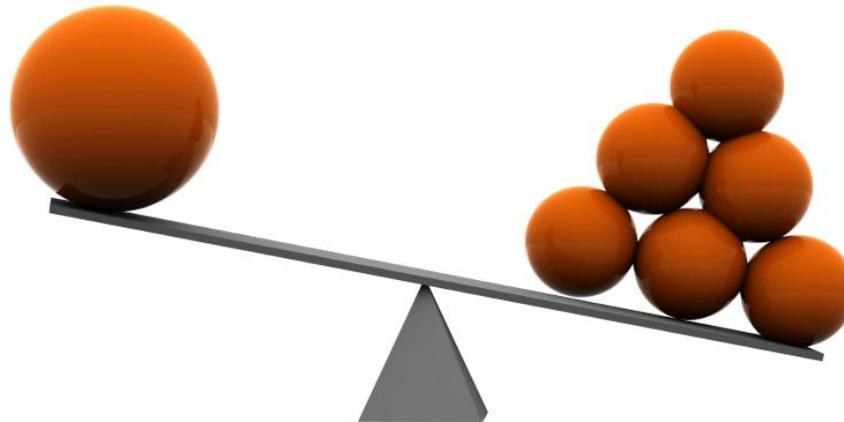
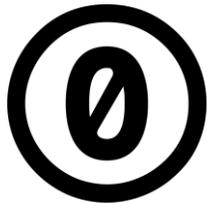
“Now is the time to move from being a ‘coordinating organisation’ to one that is providing the mechanism to bring the end users (markets, suppliers, technology providers) together to prove commerciality and generate understanding what the value offering is.”

Stephanie Thornton – Cluster Manager, Australian Ocean Energy Group (AOEG)

Ocean Energy Supply & Demand

To be successful, all industries require supply *and* demand. Globally, the ocean energy industry is strong on supply, but lacks essential demand. Without market demand, the ocean energy industry can not commercialise.

DEMAND



SUPPLY

- Technology developers
- Test Centres
- Research & Development (high academic engagement)
- Device demonstration projects
- Government support & investments programmes
- Conference & industry development
- Peak bodies
- Industry communications (eg, magazines, scientific journals, etc).

Market Development Objectives

The Summit identified five key areas that need to be addressed to create a market-pull for ocean energy in Australia.

1

Increase awareness and understanding of ocean energy by the marketplace and through this, generate strong demand for ocean energy systems.

2

Increase transmission of end user requirements to ocean energy technology developers to increase market acceptance of ocean energy systems.

3

Position ocean energy technologies as part of larger renewable energy systems.

4

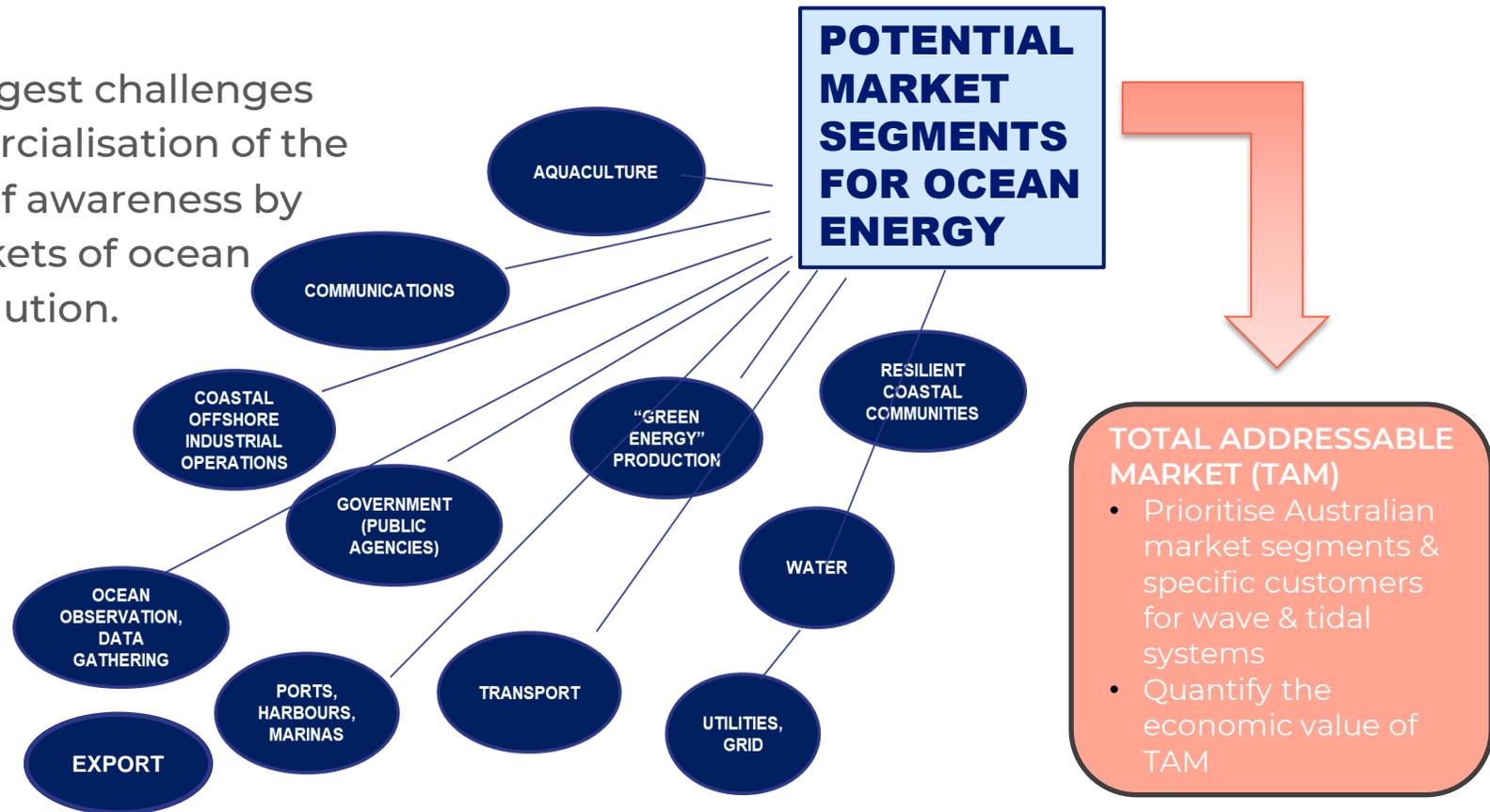
Reduce the perception of the high cost of ocean energy (LCOE) and generate understanding the costs depend on the market.

5

Reduce the uncertainty about permitting and consents process for ocean energy projects.

Market Definition

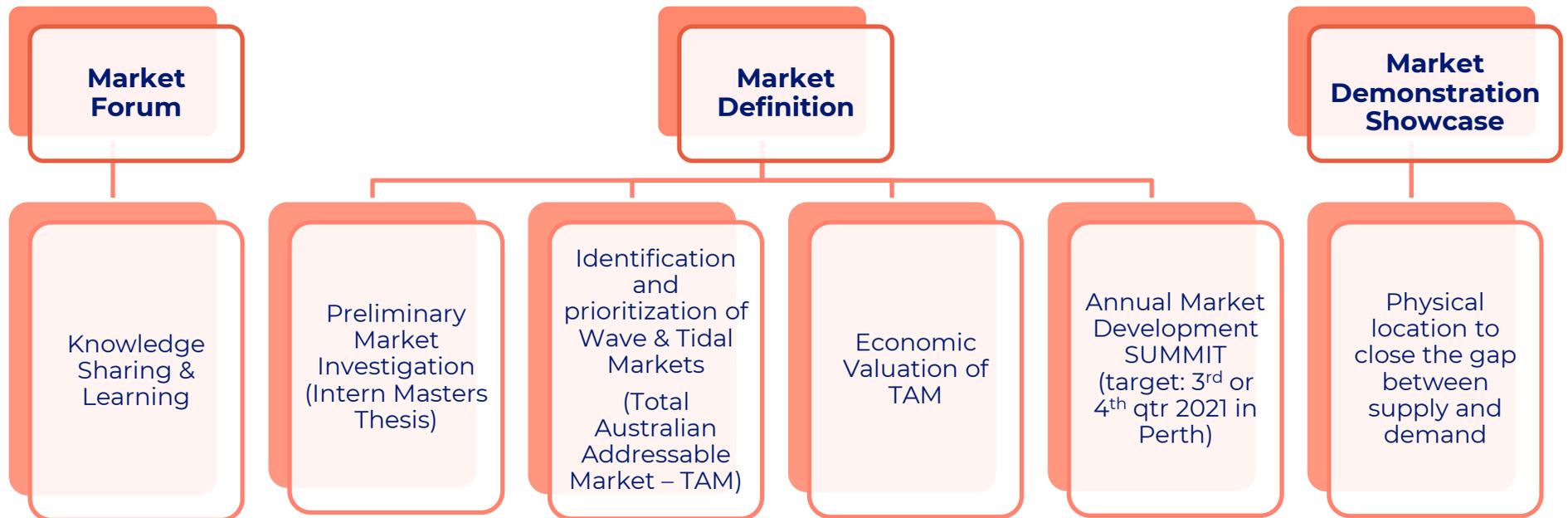
One of the biggest challenges facing commercialisation of the sector is lack of awareness by potential markets of ocean energy as a solution.



To create demand, ocean energy sector must demonstrate how it aligns with or solves environmental (eg, **decarbonisation**), economic (eg, **electrification, energy predictability**) and/or social (eg, **safety & reliability**) issues affecting end-users.

AOEG Market Development Program

AOEG's 2021 Market Development Program includes three main project streams to achieve the objectives:



Market Development Project Team (volunteers):

Alex Ogg, David Rissik, Ian Hutchison, Keith Calvert, Mike Straughton, Wiebke Ebeling

World First Market Demonstration Showcase

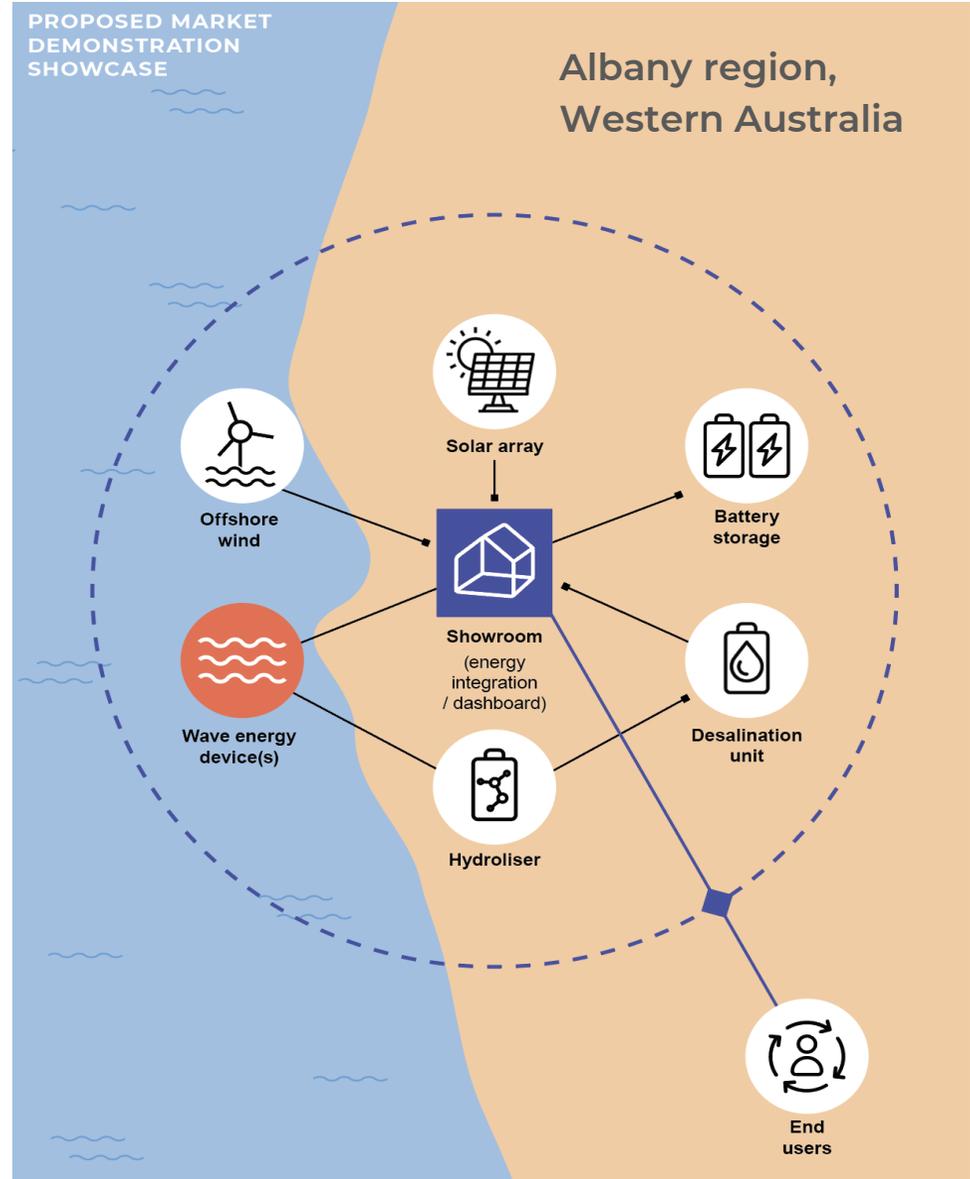


The physical Ocean Energy Market Demonstration Showcase will address the gap between developers and identified customers, to display the commercial and economic potential of ocean energy from a market-led perspective.

In strong collaboration with UWA's Wave Energy Research Centre, the Showcase will serve as a 'mirror' of a commercial integrated ocean energy system that generates and sells electricity. The site will bring together other renewable energy sources to highlight energy solutions for future customers.

This Showcase will inspire and help create demand for ocean energy.

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2021 Implementation



01. Program Fundraising

AOEG is seeking co-funders to share \$1.4 million Market Development Program implementation budget [eg, TAM, economic valuation, Summit and AOEG operations].

02. Showcase Development

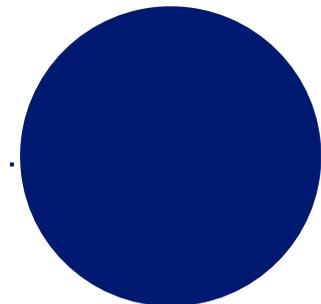
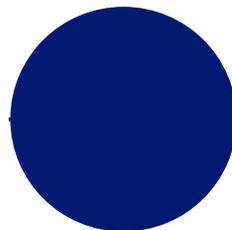
NERA committed \$175,000 to launch work on the Showcase. Support will be in the form of dedicated Showcase Program Manager, Alex Ogg, as Limited Term NERA employee.

** DRAFT work plan available upon request

\$200,000 included in UWA/WERC State funding proposal to support Showcase planning with WERC.

03. AOEG Activities, Programs and Progress

In addition to implementing the Market Development Program, AOEG will strive to grow its membership, expand the scope of its services and enhance industry support activities (eg, Government interaction, stakeholder engagement, communications, etc.).



For More Information...

Contact Stephanie at:

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M: 0458 684 018

Or speak with any of the Market Development Project Team members:

Alex Ogg, David Rissik, Ian Hutchison, Keith Calvert, Mike Straughton, Wiebke Eberling