

DOCKETED

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Response to CEC's Draft Consultant Report on Wave and Tidal Energy

(see attached document)

Additional submitted attachment is included below.

Comments on 2024 IEPR Update

Subject: Docket #: 24-IEPR-04 – Wave and Tidal Energy

Mocean Energy is grateful to the California Energy Commission (CEC) for the work done to implement SB 605 to date, and welcome the opportunity to comment on the recently released *Draft Consultant Report - Wave and Tidal Energy: Evaluation of Feasibility, Costs, and Benefits* as a useful and encouraging milestone building towards the full SB 605 report to be delivered next year.

In alignment with California based wave energy developer CalWave, eight recommendations are provided so the CEC and other stakeholders involved can ensure that the output(s) of SB 605 lead to a swift and responsible scale-up of the local marine energy sector. There are provided in order of priority, and CalWave's separate docket submission provides further detail on each. The recommendations are:

- 1) **Quantify potential savings for California ratepayers** resulting from the integration of marine energy technologies into the California grid.
- 2) **Encourage further legislation** to create the same pathway for marine energy as offshore wind.
- 3) **Implement statewide marine energy deployment targets** of 100 MW by 2030, 500 MW by 2035, and 2,500 MW by 2040.
- 4) **Work with the California Public Utilities Commission (CPUC)** to determine the steps required for marine energy to receive an explicit price per MWh as part of the Renewable Market Adjusting Tariff (ReMAT).
- 5) **Provide matching funds** for U.S. Department of Energy (DOE) and other federal awards and investments in technology Research, Development, Demonstration, and Deployment (RDD&D) relevant to marine energy.
- 6) **Clarify state regulatory processes** for deployment of marine energy projects, and encourage the appropriate federal agencies to clarify federal regulatory processes for deployment of marine energy projects.
- 7) **Partner with the U.S. Bureau of Ocean Energy Management (BOEM)** to begin planning efforts related to deployment of marine energy in both federal and state waters off the coast of California, including the potential of expanding offshore wind lease areas for multi-use opportunities to include marine energy.
- 8) Encourage the Humboldt Bay Harbor, Recreation, and Conservation District to **ensure that their \$426.7 million investment from the U.S. Department of Transportation (DOT) can also support the marine energy sector.**

Additional comments are provided below in relation to the *Draft Consultant Report*, and in line with Alta Sea's separate docket submission, which also expands on some of the numbered points summarised above.

Marine Energy Focused Initiatives. *This item particularly relates to Section 2.3.1 "Cost Reduction Through Focused Development" of the Draft Consultant Report.*

- Targeted Programming: Public programming aiming to advance clean energy often skews toward supporting wind and solar projects as these industries are more mature, with more resources to deploy in securing grants and policymakers' attention. To ensure that intended support reaches wave and tidal energy projects, **ring-fenced support is needed: i.e. targeted support with a focus on - and relevant eligibility limited to - wave and tidal energy projects.** This is a consideration that relates to more than one aspect of the SB 605 full report; it is particularly relevant to Section 2.3.1 "Cost Reduction Through Focused Development" of the *Draft Consultant Report*. Across Europe, such a focused approach has proved successful, leading to a number of EU and national public initiatives dedicated solely to wave and ocean energy, which galvanized billions of euros of funding, established research sites, and produced vital reports.¹

Public Funding and Financial Incentives. *This item particularly relates to section 2.3.4 "Incentives to Support Investment" of the Draft Consultant Report.*

- Electric Program Investment Charge (EPIC) Program - Further pre-development and pre-commercial stage public funding is needed to unlock sufficient private sector investment. A **grant funding opportunity dedicated to wave and tidal energy development**, including via match funding, through the EPIC program would be a timely and effective public investment.
- ReMAT and RPS - While ocean wave and tidal energy projects are eligible for the Renewable Portfolio Standard (RPS) and Renewable Market Adjusting Tariff (ReMAT), **tailored approaches, particularly with respect to ReMAT, to meet the needs of this nascent industry may be required.** Adjusting pricing and generator capacity eligibility requirements for wave and tidal energy projects could ensure robust access and intended efficacy.

Permitting and Coordination with Federal Agencies. *This item particularly relates to section 2.3.1 "Cost Reduction Through Focused Development" of the Draft Consultant Report.*

- Wave and Tidal Energy Coordinator - The *Draft Consultant Report* highlights the technical and financial burden of existing permitting processes for marine energy projects along the California coast. A State Wave and Tidal Energy Project Coordinator, tasked with **servicing as an inter-agency liaison and providing**

¹ <https://www.oceanenergy-europe.eu/wp-content/uploads/2020/05/ETIP-Ocean-SRIA.pdf>

guidance to the public, would help alleviate this burden on permitting applicants.

- Federal Agency Coordination - Currently federal projects advancing marine energy on the Western US Coast are concentrated in the Pacific Northwest Region (Oregon, Washington, and Alaska). For example, in partnership with universities from this Northwest region, the Department of Energy Water Power Technologies Office (DOE WPTO) established the Pacific Marine Energy Center in 2008.² The PacWave South pre-permitted testing facility (see *Draft Consultant Report* Section 1.4.3) funded by the DOE is located in Oregon. Pacific Ocean Energy Trust, headquartered in Oregon, directs the DOE WPTO sponsored Testing Expertise and Access Marine Energy Research (TEAMER) program.³ In addition to close federal collaboration during the permitting process as already addressed in the *Draft Consultant Report*, evaluating what factors have led to such effective federal engagement by our neighbours to the North in the marine energy sector could better enable Californian stakeholders to do the same, or at least further integrate into these “Pacific” federal marine energy initiatives.
 - This consideration is especially timely in light of the recently introduced Marine Energy Technologies Acceleration Act bill, sponsored by Representatives Nanette Barragán (CA-44) and Suzanne Bonamici (OR-01) – legislation that would invest \$1 billion to advance marine energy toward full scale commercialization.⁴

Offshore Wind: Co-location Opportunities and Synergies. *This item particularly relates to Section 2.3 “Increasing Cost Competitiveness” and Chapter 3 “Transmission Needs and Transmission Permitting Requirements” of the Draft Consultant Report.*

- Co-location Planning – As offshore wind is on the pathway to commercial deployment in California, there are opportunities for wave and tidal energy projects to co-locate with offshore wind, which can reduce overall energy costs,⁵ streamline permitting, improve ocean footprint efficiencies, and lessen environmental impacts. Evaluating mechanisms for relevant public agencies to consider or promote the **co-location of testing, demonstration, and deployment of wave and tidal projects with offshore wind deployments** would build upon the analysis under Section 2.3 of the *Draft Consultant Report*. For example, the California Independent Service Operator Board Approved 2023-2024 Transmission Plan allots billions of dollars to prepare for offtake from offshore wind.⁶ Wave and tidal projects could stand to benefit from such

² <https://www.energy.gov/eere/water/national-marine-energy-centers>

³ <https://www.energy.gov/eere/water/us-testing-expertise-and-access-marine-energy-research-program-teamer>

⁴ <https://barragan.house.gov/2024/07/31/barragan-bonamici-introduce-legislation-to-jumpstart-marine-energy-as-a-clean-energy-solution/>

⁵ <https://www.waveenergyscotland.co.uk/media/1471/o-lo-r10-031956-r02-final-report.pdf>

⁶ <https://www.caiso.com/documents/iso-board-approved-2023-2024-transmission-plan.pdf>

investments through strategic co-location, lessening the hurdles to meeting the transmission needs addressed in Chapter 3 of the *Draft Consultant Report*. In Europe, countries such as the Netherlands are successfully accelerating the commercialisation of ocean energy technologies like floating wind, by mandating their inclusion in the license allocation of offshore wind parks.⁷

- Shared Approaches. Evaluating the transferability of existing or forthcoming California programs, research and recommendations in support of the offshore wind industry, such as the California AB 525 Offshore Wind Energy Strategic Plan,⁸ would **avoid unnecessary duplication of efforts and advance vetted renewable energy adoption approaches**.

Production Targets. *This item particularly relates to Section 2.1 “Factors Influencing Update of Marine Energy” of the Draft Consultant Report.*

- Suggested Targets. A recent policy recommendation from Ocean Energy Europe said it best: “Establishing clear targets for ocean energy will help attract the investors, Original Equipment Manufacturers and the utilities needed to deliver larger projects and scale-up the industry.”⁹ Evaluating or recommending the implementation statewide marine energy **deployment targets of 100 MW by 2030, 500 MW by 2035, and 2,500 MW by 2040**, would bolster the analysis under Section 2.1 “Factors Influencing Update of Marine Energy” of the *Draft Consultant Report*. In Europe, countries with major ocean energy resources have set explicit deployment targets – e.g. 70MW of wave energy capacity by 2030 in Portugal; 40-60MW of wave or tidal energy capacity by 2030 for Spain.^{10,11}

In conclusion, Mocean Energy is encouraged by the developments under SB 605 thus far, and looks forward to continued engagement. We are committed to remaining engaged with future CEC consultations and will continue to collaborate with the CEC and other key stakeholders.

Yours sincerely,

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⁷ <https://www.rechargenews.com/energy-transition/gamechanger-offshore-solar-farms-poised-for-big-league-as-dutch-set-multi-gigawatt-target/2-1-1444285>

⁸ <https://www.energy.ca.gov/data-reports/reports/ab-525-reports-offshore-renewable-energy>

⁹ https://www.oceanenergy-europe.eu/wp-content/uploads/2020/10/OEE_2030_Ocean_Energy_Vision.pdf

¹⁰ <https://www.ocean-energy-systems.org/ocean-energy-in-the-world/portugal/>

¹¹ <https://www.ocean-energy-systems.org/ocean-energy-in-the-world/spain/>