

Energy - Docket Optical System

From: Jarett Goldsmith [Jarett.Goldsmith@gl-garradhassan.com]
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California Energy Commission
Dockets Office, MS-4
1516 Ninth Street
Sacramento, CA 95814-5512



Subject: Docket No. 12-EPIC-01 – Marine and Hydrokinetic Energy Comments

To the California Energy Commission:

I am writing to comment on elements of the Electric Program Investment Charge (EPIC) Proposed 2012-2014 Triennial Investment Plan related to marine and hydrokinetic energy (MHK), also known as ocean energy. I would like to thank the commission for the opportunity to provide these comments.

I am a California native and reside in San Diego where I work as an Engineer/Project Manager at the world's largest renewable energy consulting company, GL Garrad Hassan. Our firm offers independent technical and engineering services to the onshore and offshore wind, wave, tidal and solar sectors. In my position, I'm responsible for our company's involvement in wave and tidal (i.e. MHK) projects in North America.

I appreciate the inclusion of MHK within the Triennial Investment Plan and fully support the Commission's funding of the following measures specifically:

- Strategic Objective S4 – “Develop emerging utility-scale renewable energy generation technologies and strategies to increase power plant performance, reduce cost, and expand the resource base” (pg. 60).
 - *S4.4 – Proposed Funding Initiative – Investigate the Economic, Environmental and Technical Barriers to Offshore Wind in California (pg. 66).*
 - *S4.5 – Proposed Funding Initiative – Investigate the Economic, Environmental and Technical Barriers to Wave Energy Conversion in California (pg. 67).*

It can be noted that GL Garrad Hassan is a world-leader in both offshore wind and wave energy and has teams of experts with the technical capabilities and engineering experience to support both of the above initiatives. Additionally, I'd like to state my support of Strategic Objective S5 – “Reduce the environmental and public health impacts of electricity generation and make the electricity system less vulnerable to climate impacts” (pg. 69):

- *S5.3 – Proposed Funding Initiative – Develop Analytical Tools and Technologies to Reduce Energy Stresses on Aquatic Resources and Improve Water-Energy Management (pg. 73)*

MHK systems have the potential to enable electricity generation in an environmentally benign manner, especially relative to other energy generation methods. I support any initiative to further demonstrate and/or investigate the effects of such systems and the pursuit of methods to mitigate any impacts.

I also support the Strategic Objective S10 – “Leverage California's regional innovation clusters to accelerate the deployment of early-stage clean energy technologies and companies” (pg. 102):

- *S10.2 – Proposed Funding Initiative – Support Demonstration and Testing and Verification Centers to Accelerate the Deployment of Pre-Commercial Clean Energy Technologies (pg. 104).*

Under S10.2, I specifically support the inclusion of marine renewable technologies and advanced hydrokinetic turbines under the list of next-generation clean energy technologies whose advancement will be sought by leveraging public-

private partnerships at testing centers. Such testing is critical to the development of these early stage technologies. MHK test centers exist internationally, and several are under development in the U.S. (e.g. Oregon, Hawaii, Florida, New England). However, California should also support innovation of this industry at home.

I also noted that the U.S. Department of Defense is referenced as a participating organization in the EPIC program (pg. 107), which has an ambitious renewable energy goal system-wide, including ocean wave energy production. The Department of Defense is supportive of the MHK sector. The Navy has a strong relationship with the California Energy Commission, and is either actively pursuing or interested in a variety of MHK projects (e.g. the Wave Energy Test Site at Marine Corps Base Hawaii).

Finally, I support the creation of an Advisory Group related to the MHK sector (pg. 165). Due to our vast global experience in the MHK field, a representative from the wave & tidal energy team at GL Garrad Hassan would make an appropriate member of such an advisory group. It can be noted that in addition to informing the implementation of the investment plan, this group could provide support of S.14 Strategic Objective Under Market Facilitation, "Collaborate with Local Jurisdictions and Stakeholder Groups, etc." (pg. 132).

Please don't hesitate to contact me for support or involvement related to the MHK aspects of this important program. The EPIC program has the potential to be a significant catalyst to accelerate the growth of the emerging MHK industry in California.

Kindest Regards,

Jarett Goldsmith

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