

Modifications

All modifications to the Request for Information (RFI) are highlighted in the body of the RFI.

Mod. No.	Date	Description of Modification
0001	09/02/2016	1. Page 9 – Response due date modified to 11:59pm ET on September 30, 2016.

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Request for Information (RFI): Stakeholder Input on Out-year Marine and Hydrokinetic Program Strategy

DATE: April 1, 2016 and September 2, 2016
SUBJECT: Request for Information (RFI)

Purpose

The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on how to improve the Marine and Hydrokinetic (MHK) Program strategy so that it can be most impactful for the nation. The Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE) is specifically interested in information on core challenges for the industry and approaches DOE has proposed to achieve MHK commercialization in the United States. This is solely a request for information and not a Funding Opportunity Announcement (FOA). EERE is not accepting applications.

Description

EERE is seeking input from stakeholders on development of a national Marine and Hydrokinetic Program strategy.

Background

EERE is developing an MHK Program strategy that looks ahead from the present through the near, mid and long-term. The strategy will guide DOE's efforts to effectively address barriers to commercialization and accelerate the utility scale deployment of promising MHK technologies. Through a public meeting and this RFI, stakeholder input will be used to refine DOE's MHK Program strategy.

Public meeting*

EERE will be holding a public meeting Wednesday, April 27, 2016. The purpose of this meeting will be to solicit feedback from stakeholders on this RFI. There will be limited space, and attendees will be confirmed on Monday, April 11, 2016.

Where: Washington, DC at the Water Power Week Conference

Instructions: Please visit Water Power Events Page at:

<http://energy.gov/eere/water/calendars/water-power-events> for the meeting details.

Individuals interested in attending must respond to the invitation by Friday, April 8,

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2016 at 11:59 p.m. ET. Individuals will be notified via email on April 11, 2016, if confirmed as an attendee. Individuals not able to attend will have the opportunity to submit comments to the RFI until the deadline indicated in section: Request for Information Response Guidelines.

***Note that, at this time, DOE will not be holding another public meeting with the re-release of this RFI.**

Context and guidance for providing actionable input to the MHK Program Strategy

For context, the vision and mission of DOE's EERE, under which the MHK Program exists, are as follows.

EERE Vision: A strong and prosperous America powered by clean, affordable, and secure energy

EERE Mission: To create and sustain American leadership in the transition to a global clean energy economy

The MHK Program strategy presented for comment consists of the MHK vision, mission, core challenges, and top-level approaches. The vision provides the nationwide context for DOE's MHK strategy through 2030. The approaches each encompass a variety of research and development (R&D) pathways. These top-level elements are not intended to limit or bound the technology or market opportunity. The strategy is encompassing of the nation's MHK resource opportunities through intentionally presenting core challenges and high-level approaches as technology and resource agnostic. As the top-level of the strategy is comprehensive and unbounded, stakeholders should be able to identify an associated challenge and approach for all potential DOE driven efforts, but should not expect activities aligning with all approaches to receive federal investment each year with the Program's implementation of the strategy.

Once stakeholder input is received and the top-level elements of strategy are refined, activities in accordance with the approaches to address the challenges will be mapped out. Given realistic constraints of available resources the Program will naturally prioritize activities and execute them in a logical sequence to ensure investments are maximally impactful.

The strategy shall guide DOE effort for the nation's MHK advancement and therefore does not include challenges and approaches that are outside of the authority or mission of the DOE. In your response, please keep in mind that DOE cannot act on comments that propose effort outside of DOE's role.

Out-year Marine and Hydrokinetic Program Strategy for Stakeholder Input

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Vision

The nation's renewable energy portfolio will be increased and diversified by developing a cost-competitive U.S. MHK industry that responsibly utilizes the wealth of ocean and river resources, and expands U.S. companies into global markets.

Mission

Advance economically competitive and environmentally responsible MHK technologies for:

- (1) Near-term deployment in early-adopter and distributed generation markets (e.g., coastal population centers with high electricity costs) and alternate applications; and
- (2) Long-term deployment in large-scale utility markets.

Challenges

The three core industry challenges the Program has identified are Technology Maturity, Deployment Barriers, and Market Development and are described in Table 1.

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Table 1: Industry Core Challenges

Technology Maturity	Deployment Barriers	Market Development
• System optimization needed to improve performance, increase reliability, and reduce costs • Incomplete understanding of design drivers and uncertainty of modeling predictions • Complex engineering challenges of developing commercial scale projects (e.g., array design, grid connection) • Investments are spread across a great diversity of technology types rather than focused on the most promising technology development pathways	• Process for permitting deployments can be expensive and time consuming ◦ Limited amount of environmental baseline data ◦ Transferability of impacts among locations and devices • Stakeholder perceptions and awareness • High monitoring costs	• Need increased investor knowledge of technology and market • Unquantified project development risk • Incentives and policy measures needed to catalyze MHK deployment • Limited and uncertain resource data to inform degree of market opportunity

Approaches

Approaches for addressing each of the core challenges are shown in Table 2. The approaches that are clearly identified as crosscutting are signified by rows covering the width of all challenges.

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Table 2: DOE Approaches

Technology Maturity	Deployment Barriers	Market Development
- Facilitate the development of innovative solutions to advance MHK technologies - Support systematic design improvements and validation through testing - Develop, improve, and validate the tools and methodologies needed to optimize performance, reliability, and cost of energy - Focus R&D efforts on the most promising technologies (identified using quantitative metrics) for specific resource types	- Conduct scientific research to assess and address potential environmental effects - Reduce cost and complexity of environmental monitoring - Facilitate collaboration among relevant agencies for collection of baseline environmental data - Convene regulatory agencies to explore regulatory reform - Engage stakeholders of coastal areas to increase confidence and familiarity with MHK - Expand the MHK development and research community	- Clarify U.S. market opportunity - Maintain a national strategy - Support body of standards for insurance and certification - Perform analysis to inform policy incentives (e.g., RPS, PTC) - Demonstrate technology to reduce risk and build investor confidence - Support entry into early adopter markets (e.g., high cost markets, distributed generation) - Explore alternative uses of MHK technologies (e.g., desalination)
Crosscutting Approaches		
Testing and Research Infrastructure	- Ensure access to world-class testing facilities to: - Accelerate the pace of technology development - Reduce demonstration and certification costs	
Resource Characterization	Improve MHK resource assessments and characterizations needed to optimize technologies, reduce deployment risks, and identify promising markets	
Data and Information Dissemination	- Develop and utilize data sharing platforms to encourage dissemination and open exchange of information - Leverage data, methods, and lessons learned from other scientific and industrial sectors	

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Request for Information Categories and Questions

Category 1: Vision and Mission

- a. Does the vision capture what stakeholders see as the desired outcome for the sector that the nation should pursue?
- b. Does the mission clearly communicate DOE's strategic approach to realizing the vision? If not, state what would make the mission statement more clear.

Category 2: Challenges

- a. Are there any additional core challenges beyond the three identified? Please describe.
- b. Are there additions to, or refinements of, descriptors (i.e., bullet points) for each core challenge that would better describe a core challenge?

Category 3: Approaches

- a. Are there any additional high-level approaches not already covered? State the approach. Indicate which core challenge(s) the suggested approach addresses. Provide an example high impact R&D activity that doesn't map under any existing high-level approach to demonstrate the need for the suggested additional high-level approach.
- b. What is the suggested balance of level of effort and timing for the six groupings (three principally aligned to an individual core challenge, and three cross-cutting) of high-level approaches to address the three core challenges?
- c. Prioritize approaches within the groupings. Simply order the bulleted lists of Table 2, or identify highest and lowest impact approach in each grouping.

Category 4: Overarching questions

- a. MHK refers to energy conversion from waves, free flowing currents (tidal, ocean, rivers and channels), and ocean thermal gradients. Given not all stakeholders are in favor of using the term 'Marine and Hydrokinetic', would you suggest that the Program consider different terminology for the Program strategy? E.g., Marine Renewable Energy?
- b. While MHK stakeholder input in categories 1 through 3 is important for MHK Program strategy development, there may be valuable insight or information that does not fit into the defined categories. Please use this section to provide this feedback.

Disclaimer and Important Notes

This RFI is not a Funding Opportunity Announcement (FOA); therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

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Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. EERE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. EERE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that EERE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind EERE to any further actions related to this topic.

Proprietary Information

Because information received in response to this RFI may be used to structure future programs and FOAs and/or otherwise be made available to the public, **respondents are strongly advised to NOT include any information in their responses that might be considered business sensitive, proprietary, or otherwise confidential.** If, however, a respondent chooses to submit business sensitive, proprietary, or otherwise confidential information, it must be clearly and conspicuously marked as such in the response.

Responses containing confidential, proprietary, or privileged information must be conspicuously marked as described below. Failure to comply with these marking requirements may result in the disclosure of the unmarked information under the Freedom of Information Act or otherwise. The U.S. Federal Government is not liable for the disclosure or use of unmarked information, and may use or disclose such information for any purpose.

If your response contains confidential, proprietary, or privileged information, you must include a cover sheet marked as follows identifying the specific pages containing confidential, proprietary, or privileged information:

Notice of Restriction on Disclosure and Use of Data:

Pages [List Applicable Pages] of this response may contain confidential, proprietary, or privileged information that is exempt from public disclosure. Such information shall be used or disclosed only for the purposes described in this RFI [Enter RFI Number]. The Government may use or disclose any information that is not appropriately marked or otherwise restricted, regardless of source.

In addition, (1) the header and footer of every page that contains confidential, proprietary, or privileged information must be marked as follows: “Contains Confidential, Proprietary, or Privileged Information Exempt from Public Disclosure” and (2) every line and paragraph

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containing proprietary, privileged, or trade secret information must be clearly marked with double brackets or highlighting.

Evaluation and Administration by Federal and Non-Federal Personnel

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to EERE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

Request for Information Response Guidelines

Responses to this RFI must be submitted electronically to MHKRFI1570@ee.doe.gov no later than **11:59 pm (ET) on September 30, 2016**. Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and no more than 3 pages in length, 12 point font, 1 inch margins. Only electronic responses will be accepted.

Please identify your answers by responding to a specific question or topic if applicable. Respondents may answer as many or as few questions as they wish.

EERE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

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