



[6450-01-P]

DEPARTMENT OF ENERGY

**Notice of Request for Information (RFI) on Accelerated Materials R&D,
Testing/Qualification, and Cost-Effective Manufacturing Routes for Harsh Service
Environment Materials**

AGENCY: Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, Office of Advanced Energy Systems, Office of Fossil Energy, Department of Energy.

ACTION: Request for information (RFI).

SUMMARY: The Department of Energy (DOE) invites public comment on its Request for Information (RFI) number DE-FOA-0002385 regarding the MATERIALS FOR HARSH SERVICE CONDITIONS R&D. This RFI is sponsored by the Office of Energy Efficiency and Renewable Energy (EERE), Advanced Manufacturing Office (AMO), and the Office of Fossil Energy (FE), Office of Advanced Energy Systems (AES). The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to challenges and opportunities in various aspects of harsh service environment materials. These include: accelerated materials research, development, and demonstration (RD&D), testing/qualification methods, and cost-effective manufacturing routes for the development of components, systems, and products exhibiting significant, or step-change improvements over current state-of-the-art in system energy performance under harsh service conditions and extended service lifetimes. This information will be used by AMO and AES to inform strategies in support of energy savings and cost reduction goals, as well as to inform future planning and to possibly make adjustments to their R&D portfolios.

DATES: Responses to the RFI must be received by **September 17, 2020**.

ADDRESSES: Interested parties are to submit comments electronically to

HarshMaterialsRFI@ee.doe.gov. Include Harsh Service Materials R&D in the subject of the title. Only electronic responses will be accepted. The complete RFI document is located at <https://eere-exchange.energy.gov/>.

FOR FURTHER INFORMATION CONTACT: Questions may be addressed to Nick Lalena, 202-923-5637, or *HarshMaterialsRFI@ee.doe.gov*. Further instructions can be found in the RFI document posted on the EERE Exchange.

SUPPLEMENTARY INFORMATION: The purpose of this RFI is to solicit feedback from industry, academia, research laboratories, government agencies, and other stakeholders on issues related to challenges and opportunities in accelerated materials RD&D, testing/qualification methods, and cost effective manufacturing routes for the development of components, systems, and products exhibiting significant, or step-change improvements over current state-of-the-art in system energy performance under harsh service conditions and extended service lifetimes.

Harsh environments include high temperature and corrosive environments, conditions of high mechanical wear/stress/load, thermal cycling and exposure to hydrogen, irradiation, and other embrittlement mechanisms. AMO and AES now seek to gather input from stakeholders on the technical and commercial prospects of novel material development and new manufacturing capabilities including but not limited to the advantages and technical challenges associated with new material breakthroughs, strategies for de-risking the cost and performance of novel materials, and considerations for scale-up of new materials manufacturing methods. AMO and AES seek individual input on high-reaching targets/metrics and identification of key problem sets to be addressed. The intent is to define critical crosscutting problems/barriers whose

solutions represent near-term commercially viable paths to obtaining materials that can produce a step change improvement in energy performance under harsh service conditions beyond current state of the art. Specific questions can be found in the RFI. The RFI is available at: <https://eere-exchange.energy.gov/>.

Confidential Business Information

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: one copy of the document marked “confidential” including all the information believed to be confidential, and one copy of the document marked “non-confidential” with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

Signing Authority

This document of the Department of Energy was signed on August 06, 2020, by Valri Lightner, Acting Director, Advanced Manufacturing Office, Office of Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the *Federal Register*.

Signed in Washington, DC on August 7, 2020.

Treena V. Garrett,
Federal Register Liaison Officer,

U.S. Department of Energy.

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