



## REQUEST FOR INFORMATION

DE-FOA-0001346

Office of Technology Transitions  
U.S. Department of Energy

**ISSUE DATE:** May 6, 2015

**CLOSING DATE:** June 10, 2015

**SUBJECT:** Request for Information – Office of Technology Transitions

**DESCRIPTION:** The U.S. Department of Energy (DOE) seeks feedback from public and private sector stakeholders regarding opportunities to enhance the commercial impact of DOE's portfolio of Research, Development, Demonstration & Deployment activities.

**BACKGROUND:** The Department of Energy's (DOE) contributions to U.S. economic growth involve many different types of transitions in the stages of technical capability, technology development, identification of public need, and development of market acceptance. To provide the necessary central definition of vision, goals, and accountability management in these multiple activities, the Secretary of Energy established the Office of Technology Transitions (OTT) in February 2015.<sup>1</sup>

OTT will serve as a DOE-wide functional unit that coordinates the commercial development of DOE's research outputs, with a mission of expanding the commercial impact of DOE's portfolio of Research, Development, Demonstration & Deployment (RDD&D) activities. To accomplish this mission, OTT will provide technology transfer leadership and coordination responsibilities assigned to the Technology Transfer Coordinator in the Energy Policy Act of 2005 (EPAct 2005), as well as coordinate DOE-wide activities to transition technologies through the innovation cycle, to derive the maximum impact for DOE's investments. OTT will be responsible for the statutorily-created Energy Technology Commercialization Fund (TCF) in EPAct 2005, anticipated to be an approximately \$20 million fund "to provide matching funds with private partners to promote promising energy technologies for commercial purposes."

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<sup>1</sup> U.S. Department of Energy. "Energy Department Announces New Office of Technology Transitions." Press Release. February 11, 2015. <http://energy.gov/articles/energy-department-announces-new-office-technology-transitions>

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Overall, OTT will support the Department in creating stronger technology transition and commercialization capabilities to support American industries improve their global competitiveness and secure U.S. leadership in advanced energy technologies, through access to the best scientific minds, equipment, and technologies. This will increase the American taxpayer's return on investment in federally-funded science and energy research.

**PURPOSE:** The purpose of this Request for Information (RFI) is to seek input on how OTT can most effectively accomplish its mission over the short, medium, and long-term. In addition to general input on opportunities to advance its mission, OTT seeks specific input on key areas of interest, which are outlined below. The outlined topics and questions are intended to guide, but not restrict, the scope of RFI responses.

This RFI builds upon previous DOE RFIs related to technology transfer and commercialization topics, including the 2008 Federal Register Notice on DOE Technology Transfer Practices<sup>2</sup> and the 2013 Office of Energy Efficiency and Renewable Energy (EERE) Commercialization RFI.<sup>3</sup> Responses to this RFI will serve as a complement to the input collected from these previous requests; however, respondents are encouraged to submit any relevant information to this RFI, even if it appeared in a previous response.

**DISCLAIMER AND IMPORTANT NOTES:** This RFI is not a Funding Opportunity Announcement (FOA); therefore, DOE is not accepting applications at this time. DOE may issue a FOA in the future based on or related to the content and responses to this RFI. 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 DOE chooses to issue a FOA regarding the subject matter. This is also not a solicitation for a federal procurement contract. In accordance with the Federal Acquisition Regulation, 48 C.F.R. 15.201(e), responses to this notice are not offers and cannot be accepted by the Government to form a binding contract. DOE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that DOE 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 DOE to any further actions related to this topic.

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. DOE 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.

**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 must NOT include any information in their responses that might be**

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<sup>2</sup> U.S. Department of Energy. "Questions Concerning Technology Transfer Practices at DOE Laboratories." Federal Register Volume 73, Number 229. Doc No. E8-28187. November 2008. <https://www.federalregister.gov/articles/2008/11/26/E8-28187/questions-concerning-technology-transfer-practices-at-doe-laboratories>

<sup>3</sup> U.S. Department of Energy. "Request for Information - EERE Commercialization." DE-FOA-0001001. September 2013. <http://www.grants.gov/web/grants/view-opportunity.html?oppId=243333>

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**considered business sensitive, proprietary, or otherwise confidential.** Responses must be submitted with the understanding that their contents may be publicly disclosed and, in the event of a public disclosure, DOE will NOT notify respondents or provide any opportunity to revise or redact submitted information.

**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 DOE providing their response to non-Federal parties. DOE will require that non-Federal parties given access to responses will be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

**RESPONSE GUIDELINES:** All responses to this RFI must be provided as an attachment in an e-mail message addressed to [OfficeofTechnologyTransitions@hq.doe.gov](mailto:OfficeofTechnologyTransitions@hq.doe.gov) with the subject line "Response to RFI" no later than **June 10, 2015. Responses must be provided as a Microsoft Word (.doc/.docx) no more than ten (10) pages in length, 12 point font, 1 inch margins, and no more than 2MB in size.** Only electronic responses will be accepted. Responses submitted by any other means will not be considered by DOE.

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.

Please identify your answers by responding to a specific question or topic if possible. Respondents may answer as many or as few questions as they wish. Any additional comments that are not responsive to a particular question should be set out separately at the end of your response to this RFI as "Additional Comments." DOE will not respond to individual submissions or publish publicly a compendium of responses.

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## TOPICS AND QUESTIONS FOR INPUT:

### 1. Technology Commercialization Fund

#### **Background:**

Section 1001 of the EPAct 2005, as amended, established an Energy Technology Commercialization Fund (TCF) (42 U.S. Code § 16391(e))<sup>4</sup>, as follows<sup>5</sup>:

(e) TECHNOLOGY COMMERCIALIZATION FUND. – The Secretary shall establish an Energy Technology Commercialization Fund, using 0.9 percent of the amount made available to the Department for applied energy research, development, demonstration, and commercial application for each fiscal year based on future planned activities and the amount of the appropriations for the fiscal year, to be used to provide matching funds with private partners to promote promising energy technologies for commercial purposes.

To date, DOE has complied with Section 1001 by retrospectively accounting for relevant activity supported by DOE’s applied energy program offices, which include DOE funds matched by a combination of funds-in plus in-kind contributions from a private partner.<sup>6</sup> However, the National Defense Authorization Act for FY 2015 included an amendment clarifying that the Department should base the TCF on “future planned activities.”

OTT is currently developing a forward-looking approach to the implementation of the TCF, which will leverage 0.9% of the RDD&D funding in DOE’s applied energy programs to pursue high impact technology commercialization activities. DOE plans to establish the infrastructure and processes for the TCF to begin in FY 2016.

#### **Information Request:**

OTT seeks information that could inform the design and implementation of the TCF, including, but not limited to, the following questions:

1. What are the most important gaps and areas of need in the U.S. energy technology commercialization system that the TCF should address?
2. How can a TCF be designed to most effectively leverage private investment to advance the commercialization of energy technologies?
3. Similarly, how can a TCF be designed to most effectively leverage investments made by other federal agencies to advance the commercialization of energy technologies?
4. How can a TCF be designed to have a broader, catalytic impact beyond the specific projects it supports?

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<sup>4</sup> P.L. 113-291, SEC. 3144. TECHNOLOGY COMMERCIALIZATION FUND. Section 1001(e) of the Energy Policy Act of 2005 (42 U.S.C. 16391(e)) is amended by inserting “based on future planned activities and the amount of the appropriations for the fiscal year” after “fiscal year”.

<sup>5</sup> Updated statute based on amendment by the National Defense Authorization Act for Fiscal Year 2015.

<sup>6</sup> EERE temporarily established a proactive, EERE-level Technology Commercialization Fund in FY 2007 and FY 2008.

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5. What are some existing funds or program models that could inform the TCF and provide a set of best practices?

## **2. Cross-Research and Development Linkages and Innovation Cycle Transitions**

### **Background:**

DOE maintains a portfolio of RDD&D activities spanning early stage discovery-research through to commercial-scale demonstrations. The word ‘transitions’ specifically recognizes the multiple, interlinked connections among these different stages of research and demonstration that are needed to achieve commercial impact. Technology transfer related activities (e.g., invention disclosure management, patenting, licensing) comprise a sub-category of technology transition activities needed to bridge early stage research to commercial impact.

OTT is charged with more effectively coordinating DOE-wide activities to transition technologies through the innovation cycle, to derive the maximum impact for DOE’s RDD&D investment over the short, medium, and long-term. The OTT will oversee technology transitions involving all the programs of the Under Secretary for Science and Energy and coordinate across other DOE units, including Advanced Research Projects Agency-Energy (ARPA-E), Loan Program Office, and, as appropriate, the National Nuclear Security Administration, as well as with departmental management units.

### **Information Request:**

OTT seeks information that could inform its approach to coordinating DOE activities to effectively transition technologies through the innovation cycle and foster cross-research and development linkages, toward the goal of enhancing the commercial impact of DOE’s RDD&D portfolio.

1. What opportunities exist to enhance linkages and technology transitions across different DOE RDD&D performers, ranging from national laboratories and universities to small businesses and other parts of industry? How might OTT address these opportunities?
2. How can DOE more effectively track RDD&D projects and technologies at different stages of development to identify connections and transition opportunities?
3. What opportunities exist to enhance RDD&D linkages and technology transitions across DOE Program Offices? How might OTT address these opportunities?
4. What best practices exist at other institutions for fostering RDD&D linkages and technology transitions, including industry, universities, national laboratories, government agencies, and other entities?

## **3. Central Policies and Procedures**

### **Background:**

OTT is charged with working with DOE's management and legal offices to clarify and streamline relevant policies and procedures, where appropriate, to support the Department's Technology Transitions mission. This includes policies and procedures relevant to enhancing commercial impact across DOE's RDD&D portfolio, including national laboratory (intramural) research as well as extramural (university, industry, etc.) RDD&D activities. As part of this effort, OTT will assess needs and opportunities to address issues which may hinder private sector partnerships and pathways to successful commercialization, including central policies, risk tolerance and mitigation strategies, and consistency across programs and site offices.

**Information Request:**

What opportunities exist for DOE to clarify, streamline, or otherwise improve existing central policies and procedures related to the following areas, toward the goal of enhancing the commercial impact of DOE's RDD&D portfolio?

1. Conflict of interest and entrepreneurial activity policies;
2. Agreement mechanisms, approval, and speed of business;
3. DOE risk tolerance and risk mitigation approaches;
4. Contract requirements pertaining to technology transfer and commercialization;
5. Government information that is classified or has export controls; and
6. Data and metrics collection, aggregation and reporting.

**4. DOE National Laboratory Technology Transitions** (Intramural)

**Background:**

DOE's national laboratories have world-class scientific and technical facilities and personnel that foster new technologies that can lead to new industries and jobs. Through technology transfer and commercialization activities, the national laboratories have made major contributions to economic growth in the United States. Enhancing the commercial impact of the DOE national laboratory system is a core component of OTT's mission. OTT will provide technology transfer leadership and coordination roles for the key duties assigned to the Technology Transfer Coordinator in EAct 2005, which include serving as principal advisor to the Secretary on all matters relating to technology transfer, and overseeing the Technology Commercialization Fund, Technology Transfer Working Group, Technology Partnership Ombudsman, and efforts to engage private sector entities<sup>7</sup>.

**Information Request:**

OTT seeks information regarding opportunities to enhance technology transfer and commercialization at the national laboratories, building upon DOE's recent steps in this

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<sup>7</sup> The duties of the DOE Technology Transfer Coordinator are defined in Section 1001 of EAct 2005 (42 U.S. Code § 16391).

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direction. In particular, OTT seeks information on what opportunities and needs exist in the following areas and how OTT could potentially address them:

1. Supporting the transition of laboratory technologies for commercial uptake and addressing barriers that impede the progression of laboratory technologies through the innovation cycle, such as through technology maturation activities, personnel recognition or incentives, and other measures;
2. Encouraging partnerships between national laboratories and the private sector that support core DOE mission priorities and enhance the science and technology capabilities of the laboratories, while also meeting private sector needs;
3. Developing greater capabilities at the national laboratories to support technology commercialization activities, including the capabilities of the technology transfer offices, the commercialization capabilities of laboratory researchers, and the effectiveness with which the technology transfer offices and researchers work together;
4. Fostering industry connections and awareness of laboratory and user facility capabilities and available intellectual property or licensable software applications, such as through outreach activities, events, webinars, digital information resources, and other efforts to increase visibility and provide ready access to information;
5. Better identifying market opportunities and industry needs through more proactive customer discovery, customer relationship management, value proposition identification, and techno-economic analysis;
6. Improving the ease and affordability of industry access to laboratory capabilities, especially for small businesses;
7. Identifying, measuring, and monitoring key tasks and paths to success for interested parties and potential customers during their engagements with DOE and its national laboratories; and
8. Other laboratory policies, procedures, and culture related to commercial impact.

## **5. Extramural Technology Transitions**

### **Background:**

DOE's RDD&D portfolio includes a wide range of extramural partners in academia, industry, state and local government, and other entities. These entities play a critical role in advancing DOE's Technology Transitions mission by performing cutting-edge research, commercializing innovative DOE-sponsored technologies, fostering regional economic development, and breaking down market barriers to deployment. In many cases, these entities in DOE's RDD&D portfolio also collaborate with the national laboratories or could benefit from new partnerships with the labs. OTT will seek to identify ways to enhance the commercial impact of DOE's activities with these entities, to provide a greater return to the public for its RDD&D investments, and to support economic development at the regional, state, and local levels.

**Information Request:**

OTT seeks information on opportunities to enhance the commercial impact of DOE's RDD&D portfolio by transitioning and commercializing DOE-sponsored technologies in collaboration with the following external partners:

1. Universities and other research-based institutions
2. Startups and incubators
3. Small and large businesses
4. State governments, local governments, and other intergovernmental partners
5. Industrial consortia
6. International partners
7. Project developers and financiers
8. Angel investors, venture capitalists, and other early-stage investors
9. Other regionally-based organizations

*Note: these entities are welcome to provide input on other sections of the RFI as well and are not limited to comments on this topic.*

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