

**Innovation Delayed:**

Reviewing the Department of Energy's Withdrawal and Reissuance of  
Millions of Dollars Intended to Advance Solar Energy Technologies

A Majority Staff Report

Prepared for Members of the Committee on Science, Space & Technology

February 2020

## Background

The Office of Energy Efficiency & Renewable Energy (EERE) at the Department of Energy (DOE) serves as the leading Federal office for research & development to advance energy efficiency and renewable energy technologies. EERE's Solar Energy Technologies Office (SETO) aims to make solar energy resources in the United States more affordable, accessible, and reliable for Americans. In Fiscal Year (FY) 2020, SETO accounted for \$280 million of EERE's total \$2.848 billion budget.

To drive down the cost of solar electricity and improve the performance of solar technologies, SETO supports high-impact research by investing in innovative projects through Funding Opportunity Announcements (FOA). These FOAs encourage collaborative research partnerships among industries, universities, national laboratories, federal, state, and local governments, and nongovernment organizations.

Applicants to FOAs must go through a highly competitive solicitation process that includes rigorous peer review. After applications undergo review, projects are selected for negotiation to receive DOE funding. Starting in 2018, SETO has issued a large office-wide FOA each year, which accounts for the lion's share of the program's competitively awarded grant funding.

On April 17, 2018, former Secretary Rick Perry announced<sup>1</sup> that the FY18 SETO FOA<sup>2</sup> would fund about 70 awards, each ranging between \$200,000 and \$4.5 million, for a total investment of \$105.5 million.<sup>3</sup> Awards were to be separated into four distinct topics:

- **Topic 1:** Advanced Solar Systems Integration Technologies (ASSIST)
- **Topic 2:** Concentrating Solar Power Research and Development
- **Topic 3:** Photovoltaics Research and Development
- **Topic 4:** Improving and Expanding the Solar Industry through Workforce Initiatives

DOE estimated \$46 million would be awarded under Topic 1 across approximately 14 projects. It is the Committee's understanding that EERE drafted the FY18 SETO FOA between October 2017 and March 2018 in coordination with subject matter experts from DOE's Office of Electricity. Specifically, the FOA was approved by Daniel Simmons (Assistant Secretary for EERE) in November 2017, the Office of Management in January 2018, and EERE Chief of Staff and Acting Deputy Assistant Secretary for Energy Efficiency Alex Fitzsimmons in March 2018.

The milestones outlined in the FOA and other DOE planning documents were:

- May 9: Concept Papers due
- July 5: Deadline for Full Applications
- August 8: Deadline for applicants to reply to reviewer comments
- September 3: Expected announcement of award finalists

## Cancellation of the Original FOA

Originally, award finalists for the FY18 SETO FOA were to be announced on September 3, 2018. However, on August 31, despite already having completed a rigorous merit review and selection process for applications to this FOA, EERE cancelled Topic 1 (\$46 million of the ASSIST opportunity) at the direction of then-Acting Assistant Secretary for EERE, Ms. Cathy Tripodi. EERE contacted applicants with an email notice saying that SETO planned to revise and reissue Topic 1 as a separate FOA to be released on September 15. Applicants were told they needed to submit a new application to compete for Topic 1 funding.

### SETO FOA TOPIC AREA 1 NOTICE

On behalf of the Department of Energy (DOE), Office of Energy Efficiency and Renewable Energy (EERE), we would like to thank you for submitting an application in response to the Solar Energy Technology Office (SETO) FY18 Funding Opportunity Announcement (FOA) DE-FOA-0001840. We are writing to inform you of a change to Topic Area 1 of the FOA, Advanced Solar Systems Integration Technologies.

DOE is committed to improving the affordability of energy technologies and strengthening the Energy Sector's capability to withstand cyber and physical threats, including natural disasters. Improving the strategic location and situational awareness of solar systems can help ensure continuity of service in the face of widespread and coordinated threats. Developing innovative approaches to accelerate the transfer of solar system solutions that will improve Energy Sector resilience is also a priority.

In order to better align the FOA objectives to the mission objectives of DOE, EERE plans to revise Topic Area 1 and issue a new FOA. **Because a new FOA is planned, if you would like to apply to the revised Topic Area 1, an application must be submitted under the new FOA in EERE Exchange by the deadline.** Please carefully review the revised emphasis and program objectives when the new FOA is issued, and revise your application accordingly.

On behalf of EERE, we would like to express our sincere appreciation for the significant time and effort you and your team invested in preparing this application, and for your interest and participation in the EERE Solar Energy Technologies Office activities. We hope that you will continue to participate in future activities and programs with EERE.

The Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0001987 is provided below for your reference.

On September 10, 2018, Democracy Forward—a nonprofit, government watchdog group—submitted a request to DOE under the Freedom of Information Act (FOIA) seeking all correspondence on the cancellation of Topic 1. Democracy Forward then filed a lawsuit on October 25, 2018 to compel DOE's compliance with the FOIA,<sup>4</sup> noting that as of the filing, DOE had not responded to the FOIA request with any records or any reasons for withholdings. In the filing, Democracy Forward argued that DOE's decision to cancel Topic 1 was arbitrary and that the public deserved to know why DOE elected to waste the time and money of prospective grantees and taxpayers.<sup>5</sup> Democracy Forward spent several months in court to eventually obtain

more than 3,000 pages of related documents and emails, and it released hundreds of emails to the media in August 2019. Excerpts from those document productions are included below.<sup>6</sup>

EERE officially released<sup>7</sup> the revised ASSIST FOA<sup>8</sup> on October 15, 2018 and selected 10 award finalists on March 25, 2019 to receive \$36 million in funding.<sup>9</sup>

### **Committee Concern: Fabricated Justification and Departure from Usual Process**

EERE told Committee Staff in September 2019 that it cancelled Topic 1 because it lacked adequate focus on grid resilience and cybersecurity. Committee Staff asked DOE for additional information about how this determination was made but did not receive further clarification. DOE has indicated that coordination with the Office of Electricity was needed in order to ensure that the revised FOA would incorporate grid-related concerns to an adequate measure. Committee Staff were perplexed by this explanation, as agency documents clearly indicate that SETO coordinated “closely” with the Office of Electricity in the process of drafting the original FOA between October 2017 and March 2018.

In fact, agency documents indicate that the initial impetus for the recompetes was that Ms. Tripodi and Katie Jereza, former Deputy Assistant Secretary of DOE’s Office of Electricity, simply did not understand the Topic 1 language and called for its cancellation as a result. On July 30, 2019, Ms. Tripodi emailed staff in DOE’s Office of Electricity to initiate a rewrite of Topic 1 as follows:

<b>From:</b>	Tripodi, Cathy
<b>Sent:</b>	Monday, July 30, 2018 1:44 PM
<b>To:</b>	Walker, Bruce;Lotto, Adrienne;Jereza, Catherine
<b>Subject:</b>	Update: Solar Transmission Grid FOA
<b>Attachments:</b>	Solar Grid RFP.docx

Hi Bruce, Adrian and Katie:

The solar office has offered to rewrite Topic 1 in their Solar FOA. While it is on the street, we can just do an amendment to change it. Katie and I had reviewed it with the solar Team and we did not understand it and so I was hoping that you all could rewrite it to achieve the grid integration consistent with OE’s mission. **Please see (b) (5)** and give me your suggested language as soon as you can. It is approximately \$50 million.

Thank you,  
Cathy T.

Despite Ms. Tripodi’s representations that the solar office had offered to rewrite Topic 1 as of July 30, it is apparent that EERE career staff were largely cut out of the decision to do so. Ms. Tripodi did not deliver the final word that she would require a rewrite to SETO, including its director, until at least August 28 – a full four weeks after setting the process in motion with the Golden Field Office.

---

**From:** Tripodi, Cathy  
**Sent:** Tuesday, August 28, 2018 7:36 AM  
**To:** Passarelli, Derek <[REDACTED]>  
**Subject:** RE: Misc1.docx

Hi Derek: I got caught up in another project and will get back to you around or before noon today. And I would like to be the ones to socialize it first with SEIO so please give me until noon but let's plan on going with the schedule you proposed with a slight pause until noon. Thanks, Cathy T.

---

**From:** Passarelli, Derek  
**Sent:** Monday, August 27, 2018 7:01 PM  
**To:** Tripodi, Cathy <[REDACTED]>  
**Subject:** RE: Misc1.docx

I do. (b) (5)

Do you want us to proceed with preparing the FOA? We would need to reach out to SEIO to work with them to prepare the FOA Requirements Document and the FOA.

Also, if you would like us to quickly prepare a Notice of Intent, we will need to reach out to SEIO to begin that process.

Similarly, the process for re-issuing the FOA itself circumvented career staff with decades of experience.

---

**From:** Passarelli, Derek  
**Sent:** Monday, August 27, 2018 6:41 PM  
**To:** Tripodi, Cathy <[REDACTED]>  
**Subject:** RE: Misc1.docx

Cathy,

I have reviewed and run a comparison of the language you provided relative to the original FOA Topic 1 language. (b) (5)

---

**From:** Tripodi, Cathy  
**Sent:** Monday, August 27, 2018 2:18 PM  
**To:** Passarelli, Derek <[REDACTED]>  
**Subject:** Misc1.docx

Derek: what do you think of this language? Cathy T.

<< File: Misc1.docx >>



DOE disputes this estimate, saying it spent closer to \$80,000 on the full review process. However, this estimate only includes payment for the external, nonfederal peer reviewers and does not include staff time and resources as well as reviewer recruitment and workshops.<sup>16</sup> Further, neither estimate captures the invaluable time and resources spent by applicants who submitted lengthy proposals packed with technical information.

### **Committee Concern: Impact on Applicants**

Typically, once a FOA has been announced, applicants first submit a letter of intent and a concept paper outlining the proposed research project. EERE reviews and provides preliminary feedback on these concept papers and either encourages or discourages applicants to submit full applications.

Applicant teams usually spend 3 to 4 weeks developing a 2 to 5-page concept paper that addresses the technical requirements and priorities detailed in the FOA. The size of these teams varies, depending on factors such as whether a university has partnered with a private company or national lab. Committee Staff spoke with several applicants that estimated their teams ranged from 4 to 8 members, with each person spending 3 to 5 hours per week to develop one concept paper. Occasionally, EERE asks clarification questions after receiving concept papers and applicants have 2 to 3 days to respond. Agency documents indicate that 367 concept papers from 275 unique applicants were received under Topic 1.

If an applicant receives an encouragement letter from EERE, developing a full proposal is a much heavier lift, as it contains both the technical and financial aspects of the project. One applicant estimated it takes about three times as much work to develop a full application in comparison with the concept paper. Additional experts may be added to a team to absorb the increased workload. Several applicants confirmed that it is very time consuming to form a team and prepare a competitive proposal. Agency documents show that 92 unique applicants submitted full applications under Topic 1.

Committee Staff spoke with several applicants who received the notice of cancellation on August 31, 2018 who were frustrated and upset by what they saw as a confusing decision that DOE never adequately explained to them. As outlined above, applicants had anticipated that they would be notified of their status as finalists just a few days later, around September 3. One applicant felt that the email they received on August 31 was not clear that DOE was canceling the FOA and replacing it with a new one. Another applicant said they never heard from DOE that the FOA had been cancelled, and only found out about it through colleagues in the field several months later. Several applicants were perplexed by the cancellation after they had invested so much time in developing applications. One applicant told Committee Staff that it felt like a waste of everyone's time writing and submitting the proposal only to be told so late that the program would not move forward in its current state.

Committee Staff are concerned that this episode threatens DOE's ability to attract the most meritorious research partners for future opportunities. The cancellation of this FOA so far into the award process may have resulted in tens of thousands of wasted workhours by the solar power researchers that this program is supposed to support. If potential grantees do not think that DOE is a reliable partner or doubt that the competitive process is fair, they are less likely to

engage with DOE in the future.<sup>17</sup> Former senior DOE officials told Committee Staff that EERE is always working in competition with foreign governments, who are in aggressive pursuit of R&D partnerships with American companies and university researchers who could deliver them an edge in energy innovation.

### **Committee Concern: External Merit Review**

The purpose of merit review in DOE competitive grant-making is to provide an independent assessment of the technical merit of an eligible and responsive application for financial assistance. In a typical process, merit reviewers will meet in person near the end of the competitive phase to discuss the final scores, strengths, and weaknesses of each application and evaluate applications against the formal Merit Review Criteria defined in the FOA. The merit reviewers will make their recommendations for which proposals should receive grant awards to EERE officials, who then make final selections.

Agency documents suggest that DOE engaged 30 expert panelists to conduct the merit review of the original FY18 SETO FOA. The in-person peer review process for the 2018 SETO FOA took place in mid-August 2018. Agency documents suggest that unfortunately, the decision to rescind Topic 1 had already been made and set in motion by DOE political officials well before this time. But external reviewers that spoke with Committee Staff did not recall any discussion with DOE at the peer review sessions that indicated Topic 1 would be eliminated or handled differently than usual. The reviewers' time in reviewing Topic 1 submissions was wasted, and it is highly likely that the officials who were directing the re-issuance of the FOA would have been aware of that before the fact.

Committee Staff are concerned that this decision to cancel a FOA so late in the process threatens the trust of DOE's expert reviewers. While it is appropriate for DOE to make changes to funding opportunities in some cases where new and unexpected external circumstances require such changes – a condition that has not been met in this particular case – such a significant shift should always be made in a manner that minimizes the potential to waste expert reviewers' time.

Several former senior staff for DOE emphasized to Committee Staff how challenging it can be to build and maintain an experienced cohort of external reviewers who are willing to answer the call when DOE reaches out for their assistance. As outlined in the Departmental Merit Review Guide, external review panelists are to be senior technology experts in their specified fields. DOE seeks to prioritize reviewers with advanced degrees, memberships in key societies such as the National Academies of Science, and a record of publications and patents related to the technology being evaluated.<sup>18</sup> These kinds of candidates tend to have many demands on their time, and many potential candidates are ineligible to participate as a reviewer because they may be part of a team of applicants themselves.

Committee Staff are also concerned that the external reviewers for the original FOA were not reimbursed for their services in a timely fashion. In general, external reviewers are reimbursed for their accommodations and travel to in-person reviews in addition to a modest honorarium for their contributions. Agency documentation shows peer reviewers for the original 2018 SETO FOA were frustrated that they did not receive reimbursement or honoraria as expected for several

weeks after paying out of their own pockets to travel to Washington D.C. for the in-person reviews.

**From:** Fricker, Kyle  
**Sent:** Thursday, August 30, 2018 9:12 AM  
**To:** DL-EERE-4S PMSolar <[REDACTED]>  
**Subject:** SETO FOA - Honorarium Delays

Hi all—

I want to bring to everyone's attention the issue of honorarium delays for our reviewers. We have 120+ reviewers for the FOA, and it is my understanding that most or all have not received payment. Most of them had to pay hundreds to a thousand dollars or more to travel to our merit review meetings 2-3 weeks ago (and likely expended the money on flights/hotels well over a month ago). Some of them work for nonprofits or governmental organizations and do not have the resources to be in the holding pattern they now find themselves in.

I just want to make sure we are doing everything we can to get them paid as fast as possible. I have multiple upset reviewers for my panels and I am sure the other FOA leads have the same. I wouldn't want this experience to sour the reviewers experience and make them less likely to accept the invitation in the future.

Thanks for your attention to this,

Kyle

Kyle J Fricker, PhD  
Solar Energy Technologies Office

These delays were ultimately resolved, but it is unfortunate that DOE apparently fumbled this important administrative matter on the same occasion of the cancelled FOA. A healthy merit review process for the highly technical topics that EERE funds is only possible if DOE can cultivate and maintain good working relationships with the most qualified external partners. These types of missteps threaten DOE's ability to steward the agency's many critical responsibilities.

## Conclusion

EERE SETO and its predecessor programs at DOE have played a major role in advancing solar energy technologies from their earliest iterations in the late 1970s. They have helped deliver a competitive innovation edge to the United States that requires steady vigilance to maintain amidst robust international competition. To continue this commendable legacy of success, it is vital that DOE's innovation mission remain independent of political interference and respectful of the time and money that prospective agency partners and stakeholders invest in order to work with EERE.

## **Timeline of Events**

**April 17, 2018:** DOE issues the FY18 SETO FOA (DE-FOA-0001840)

**May 9, 2018:** Deadline for the FY2018 SETO FOA Concept Papers

**July 5, 2018:** Deadline for the FY2018 SETO FOA Full Applications

**July 30, 2018:** Then-Acting Assistant Secretary for EERE, Cathy Tripodi, emails officials in DOE's Office of Electricity expressing her intent to rewrite Topic 1 of the FY2018 SETO FOA

**Mid-August:** In-person external merit review of the FY2018 SETO FOA applications occurs

**August 31, 2018 2:37 pm:** Staff from DOE's Office of the Chief Financial Officer email House Appropriations Staff to advise them that DOE would soon be sending out a notice of cancellation for Topic 1 and introducing a new FOA to be announced at a later date

**August 31, 2018 3:00 pm:** EERE posts a Notice of Intent for the new ASSIST FOA (DE-FOA-0001987) to replace Topic 1 of the FY2018 SETO FOA

**September 3, 2018:** Per the schedule outlined in the FY2018 SETO FOA, DOE had anticipated announcing award finalists by this date

**September 10, 2018:** Democracy Forward submits a Freedom of Information Act request to DOE for documents related to the FY2018 SETO FOA

**October 15, 2018:** DOE issues the ASSIST FOA (DE-FOA-0001987) with similar topic areas to the original Topic 1 but with two subtopics instead of four

**October 25, 2018:** Democracy Forward files a lawsuit in District Court for the District of Columbia to compel DOE compliance with its request for documents under FOIA

**March 25, 2019:** DOE announces 10 awardees for the re-written ASSIST FOA

## Endnotes

---

<sup>1</sup> Department of Energy, “U.S. Secretary of Energy Rick Perry Announces \$105 Million in New Funding to Advance Solar Technologies,” April 17, 2018, accessed here: <https://www.energy.gov/articles/us-secretary-energy-rick-perry-announces-105-million-new-funding-advance-solar-technologies>.

<sup>2</sup> Department of Energy, Office of Energy Efficiency and Renewable Energy, Solar Energy Technologies Office, FY2018 Funding Opportunity Announcement (DE-FOA-0001840), accessed here: <https://eere-exchange.energy.gov/FileContent.aspx?FileID=09e8a87d-3019-49bd-99a7-4bdea3bbc8ce>.

<sup>3</sup> Department of Energy, “Funding Opportunity Announcement: FY2018 Solar Energy Technologies Office,” accessed here: <https://www.energy.gov/eere/solar/funding-opportunity-announcement-fy-2018-solar-energy-technologies-office>.

<sup>4</sup> United States District Court for the District of Columbia, Democracy Forward Foundation v. U.S. Department of Energy, Case 1:18-cv-02464, Filed 10/25/18, Accessed here: <https://democracyforward.org/wp-content/uploads/2018/03/attachment-1-1.pdf>.

<sup>5</sup> United States District Court for the District of Columbia, Democracy Forward Foundation v. U.S. Department of Energy, Case 1:18-cv-02464, Filed 12/06/18, Accessed here: [https://www.eenews.net/assets/2018/12/07/document\\_gw\\_08.pdf](https://www.eenews.net/assets/2018/12/07/document_gw_08.pdf).

<sup>6</sup> E&E News, “Solar grant costs 10 times more than agency claimed – emails,” August 8, 2019, accessed here: <https://www.eenews.net/stories/1060881569>.

<sup>7</sup> Department of Energy, “Funding Opportunity Announcement: Advanced Systems Integration for Solar Technologies (ASSIST),” accessed here: <https://www.energy.gov/eere/solar/funding-opportunity-announcement-advanced-systems-integration-solar-technologies-assist>.

<sup>8</sup> Department of Energy, Office of Energy Efficiency and Renewable Energy, Advanced Systems Integration for Solar Technologies: Solar Situational Awareness and Resilient Solutions for Critical Infrastructure (DE-FOA-0001987), accessed here: <https://eere-exchange.energy.gov/FileContent.aspx?FileID=e4a2ddcf-36c2-45cb-989e-9067e1a91c8b>.

<sup>9</sup> Department of Energy, Office of Energy Efficiency and Renewable Energy, Solar Energy Technologies Office, “Advanced Systems Integration for Solar Technologies (ASSIST): Situational Awareness and Resilient Solutions for Critical Infrastructure,” accessed here: <https://www.energy.gov/eere/solar/advanced-systems-integration-solar-technologies-assist-situational-awareness-and>.

<sup>10</sup> Email from Ms. Diana Bobo to the SETO Systems Integration Program Manager, Mr. Guohui Yuan, on Thursday, September 6, 2018 at 12:19 PM.

<sup>11</sup> Email from Mr. Yuan to Ms. Bobo on Thursday, September 6, 2018 at 1:33 PM.

<sup>12</sup> Email from Mr. Timothy Unruh to himself on Monday, September 10, 2018 at 4:53 PM.

<sup>13</sup> Email from House Appropriations Committee to former Chief Financial Officer, Mr. John G Vonglis, on Friday, August 31, 2018 at 8:12 PM. In addition, email from Mr. Vonglis to the current Director of Budget, Mr. Christopher Johns, and the former Associate Director for External Coordination, Ms. Bridget Forcier on August 31, 2018 at 8:19 PM.

<sup>14</sup> Email from Ms. Forcier to Mr. Vonglis and Mr. Johns on August 31, 2018 at 10:51 PM.

<sup>15</sup> See also E&E News, “Solar grant costs 10 times more than agency claimed – emails,” August 8, 2019, accessed here: <https://www.eenews.net/stories/1060881569>.

<sup>16</sup> Bloomberg Environment, “Nixed Solar Grant Opportunity Cost \$500,000, Drawing Hill Scrutiny”, December 4, 2018, accessed here: <https://news.bloombergenvironment.com/environment-and-energy/nixed-solar-grant-opportunity-cost-500-000-drawing-hill-scrutiny-1>.

<sup>17</sup> Governors’ Wind & Solar Energy Coalition, “‘This smells’: Agency under fire over solar grant announcement,” December 10, 2018, accessed here: <https://governorswindenergycoalition.org/this-smells-agency-under-fire-over-solar-grant-announcement/>.

<sup>18</sup> Department of Energy, Office of Procurement and Assistance Policy, Office of Acquisition Management, “Merit Review Guide for Financial Assistance: A Guide to the Award and Administration of Financial Assistance,” April 14, 2017, accessed here: [https://www.energy.gov/sites/prod/files/2018/03/f49/eere\\_doe\\_merit\\_review\\_guide.pdf](https://www.energy.gov/sites/prod/files/2018/03/f49/eere_doe_merit_review_guide.pdf).