

**Written Testimony to the
U.S. House of Representatives, Committee on Science, Space, and Technology
Subcommittee on Investigations and Oversight and Subcommittee on Energy
Management and Spending Challenges Within the Department of Energy's Office of Energy Efficiency
and Renewable Energy**

Arjun Krishnaswami
Policy Analyst
Natural Resources Defense Council
February 5th, 2020

Good morning Chair Johnson, Ranking Member Lucas, Chair Foster, Ranking Member Norman, Chair Fletcher, Ranking Member Weber, and distinguished Members of the Subcommittees. My name is Arjun Krishnaswami, and I am a Policy Analyst representing the Natural Resources Defense Council (NRDC). Thank you for the opportunity to speak with you today about the disturbing trends in the Trump administration's management of the historically successful applied energy programs housed within the U.S. Department of Energy. Specifically, I will discuss DOE's cancellation of \$46 million in solar research and development, NRDC's analysis of politically motivated delays in spending, and attempts to starve EERE of staff to constrain the clean energy programs. I will also share a vision for expansion and curation of the agency to effectively combat the climate crisis.

I appear on behalf of NRDC's more than three million members and online activists, who have benefitted from DOE's clean energy successes to date. Our members, like all Americans, rely on a well-functioning energy system and, in the face of climate change risks, are counting on increased funding for—and proper management of—the agency's programs.

I look forward to discussing these issues and working with Congress toward solutions today and in the future. Let me begin with an overview of why the programs that are the focus of my testimony—including EERE and the Advanced Research Projects Agency—Energy (ARPA-E)—are so important.

I. DOE innovation programs are a smart investment for the environment and the economy

Increased public investment in clean energy innovation is essential to maintain U.S. competitiveness in a changing global economy, bring the economic benefits of clean energy to more people, and combat climate change.

Addressing the climate crisis will require total, rapid transformation of global energy systems, including increasing energy efficiency and zero-emission power generation at record pace, efficiently electrifying buildings and transportation systems to replace fossil fuel use, and transitioning industrial processes to be carbon neutral. To achieve this transformation, the United States needs a comprehensive set of policy and technology solutions to accelerate the clean energy transition in a way that provides good quality jobs for millions more Americans and leaves no people or communities behind in the new clean energy economy.

Innovation—including research, development, demonstration, and deployment—is an essential component of the necessary policy toolkit. Federal innovation programs have already helped bring us the technology solutions driving growth in the clean energy economy, and expansion of these programs will improve existing technologies and commercialize new ones to make the transition occur at a lower cost, on a faster timeline, and with greater benefits for more people.

A robust federal innovation program will not only help the nation address climate change but also help ensure that the United States is a global leader in renewable energy, energy efficiency, clean industry and manufacturing, sustainable transportation, and grid modernization. Given the trillions of dollars of projected investments in global energy markets in the coming years, countries that take decisive action to advance the clean energy economy, including a commitment to innovation, will set themselves up to lead the global response to climate change while also ushering in a new age of economic prosperity.¹

Congress's investments in DOE have generated huge returns for the American people. Nearly 40 years of federally funded research and development has helped enable plummeting costs for cornerstone clean energy technologies such as highly efficient LED lighting, electric vehicle batteries, solar panels, and wind turbines. For example, thanks in large part to DOE's Solar Energy Technologies Office, the cost of installing large solar farms decreased by more than 74 percent in the last 10 years, enabling solar technology to grow from a novelty that powers our calculators to a serious grid player that produces enough electricity to operate more than 11 million U.S. homes.² Thanks to this growth, the solar industry employed about 335,000 people across the country in 2018.³

These and other successes demonstrate that DOE's Office of Energy Efficiency and Renewable Energy is a commonsense use of taxpayer money. Third-party, peer-reviewed evaluations of EERE programs estimate that for every taxpayer dollar invested through EERE, the United States gains \$33 in economic benefits.⁴

Failure to deploy available funding in a timely fashion—as has been occurring—is a missed opportunity to cash in on these rewards and take advantage of a narrowing window to commercialize and deploy technologies to urgently address climate change. Moreover, when DOE delays or fails to distribute funds, the agency is flouting Congressional intent.

II. DOE's actions are slowing clean energy benefits from reaching the American people

Since the Trump Administration took over in 2017, several DOE management irregularities have come to NRDC's attention, raising concerns that the agency may be mismanaging appropriated money for political goals and preventing valuable innovation funds from reaching researchers and businesses. Below is a list of these troubling instances, alongside the corresponding analysis that NRDC and others performed to unpack the implications. These examples make it clear that we need increased

¹ International Energy Agency, "World Energy Outlook," <https://www.iea.org/topics/world-energy-outlook>.

² NRDC, "Revolution Now," <https://www.nrdc.org/revolution-now>

³ Environmental Entrepreneurs (2019), "Clean Jobs America," <https://www.e2.org/wp-content/uploads/2019/04/E2-2019-Clean-Jobs-America.pdf>

⁴ Dowd, Jeff (2017), "Aggregate Economic Return on Investment in the U.S. DOE Office of Energy Efficiency and Renewable Energy," <https://www.energy.gov/sites/prod/files/2017/11/f46/Aggregate%20ROI%20impact%20for%20EERE%20RD%20-%202010-31-17%20%28002%29%20-%202011-17%20%28optimized%29.pdf>

congressional oversight and reauthorization of DOE's clean energy programs to ensure responsible management of federal funds. While I understand the hearing is focused on issues with EERE management, I also include distressing examples of possible mismanagement of the Advanced Research Projects Agency–Energy (ARPA-E) because I believe that these examples reflect the same worrying trends that have affected EERE.

Cancelation of Solar Funding Opportunity Announcement

DOE canceled \$46 million in R&D funding for solar energy in August 2018, after the funding opportunity had been approved by DOE and EERE leadership, received significantly more applications than could be funded, and completed the in-person merit review process. A freshly named acting political official was responsible for canceling the Funding Opportunity Announcement (FOA) in her short time heading the office. This incident raises questions about the effect of the administration's political agenda on DOE funding processes, especially given that the administration has proposed devastating cuts to the solar program year after year. We urge the subcommittee to further investigate potential mismanagement and waste associated with the FOA cancelation in order to prevent similar issues from occurring in the future.

Then-Secretary Rick Perry announced a \$105 million FOA for solar energy technologies on April 17, 2018. The FOA was the solar office's main competitive funding opportunity for FY18 and was comprised of four topics. Topic 1 included \$46 million for advanced systems to integrate solar resources onto the grid. Concept papers were due on May 9, 2018, full applications were due on July 5, 2018, and the in-person merit reviews were scheduled for the third week of August. During the application process, Topic 1 received 367 concept papers, and 92 entities went on to apply for approximately 14 awards. The process went ahead as planned through the merit review process in August. Then, on August 31, 2018, DOE abruptly canceled Topic 1 and announced a Notice of Intent to issue a new FOA for the same topic in mid-September. More than 300 applicants were notified they had to reapply to be eligible for the new FOA, after spending up to tens of thousands of dollars on their original applications.

My testimony includes information from records produced as part of Freedom of Information Act litigation brought by Democracy Forward against the Department of Energy regarding the FOA cancelation. Democracy Forward is a non-profit organization that works to expose and litigate corruption in the executive branch of the federal government. The records provide useful information to understand the timeline, impact, and, to some extent, the justification of the FOA cancelation, as well as details on who was involved in the process. They also raise additional questions about the canceled FOA that merit further investigation to clearly understand why the FOA was canceled and how to prevent similar issues in the future.

On July 5, 2018, midway through the Topic 1 process, it was reported that Cathy Tripodi was appointed to the position of Acting Assistant Secretary for EERE after Dan Simmons was nominated to fill the position of Assistant Secretary on a permanent basis.⁵ Five days later, the documents show, Tripodi was notified that it would be very difficult to change the criteria for active FOAs because "It is too late to change any of the criteria for any FOAs that have already closed" and "if we were to change the criteria for any that are still open, we'd need to publish a FOA amendment and extend the open timeframe for

⁵ Marsha, Christa, "Trump taps former solar lobbyist as acting renewable chief," July 5, 2018 <https://www.eenews.net/stories/1060087939/>.

all applicants.”⁶ The application period for the solar FOA had closed on July 5, the day that it was reported Ms. Tripodi entered into her new role. Despite being warned of the difficulty of amending the FOA so late in the process, the emails show Ms. Tripodi proposed to rewrite Topic 1 on July 30.⁷ She specifically noted that “we can just do an amendment to change [the FOA],” even though the FOA application period had closed almost a month prior.⁸ On August 20, Ms. Tripodi was awaiting updated Topic 1 language from the Office of Electricity (OE) in order to adjust the FOA.⁹ Meanwhile, DOE held in-person merit review the previous week, and the Federal Consensus Panel—to confirm the selections that the reviewers recommended—was ongoing as Ms. Tripodi awaited edits to the FOA.¹⁰ The emails show that on August 27, Ms. Tripodi received suggested language from OE.¹¹ On August 31, EERE issued a cancellation of Topic 1.¹²

Cancellation of the FOA wasted federal resources. DOE invests significant resources into designing and writing FOAs, reviewing applications, and coordinating review processes. Each FOA takes significant staff and contractor time, as well as the time and resources spent by merit reviewers. Because DOE canceled Topic 1 of the FOA so late in the process, most of these resources had already been expended: staff had written the FOA and shepherded it through the entire approval process, reviewed concept papers, invited entities to apply, and coordinated the merit review process.

In total, DOE may have squandered close to **\$1 million**, including staff and contractor time and reviewer compensation. This internal DOE estimate was revealed in an August 29 email from a Solar Energy Technologies Office program manager to Ms. Tripodi.¹³ This estimate does not include the resources spent by the businesses and researchers that applied for the canceled FOA, which could equal up to tens of thousands of dollars per applicant.¹⁴

Though the harmful impacts of the cancellation are severe and warrant the attention of Congress, the most worrisome takeaway is the indication of deep politicization of DOE. DOE should be guided by science- and merit-based decision-making to advance the goals set by the agency’s authorizing statutes, within the bounds set by congressional appropriations. The details of DOE’s grantmaking should be championed by the career employees, who include some of the nation’s foremost experts on clean energy technology and are an integral reason why DOE funds have been so effective to date. However, the process leading up to the cancellation of Topic 1 suggests a divergence from this career-staff-driven approach in favor of a process designed to meet political objectives.

DOE published the initial solar FOA in April 2018, after making it through the full formal review process by political leadership. Daniel Simmons, who at the time was serving as the Principal Deputy Assistant

⁶ July 10 email to Cathy Tripodi, Attachment 1.1.

⁷ July 30 email from Cathy Tripodi, Attachment 1.2.

⁸ July 30 email from Cathy Tripodi, Attachment 1.2.

⁹ August 20 email from Ian Hamos, Attachment 1.3.

¹⁰ August 21 email to Cathy Tripodi, Attachment, 1.4.

¹¹ August 27 email from Cathy Tripodi, Attachment 1.5.

¹² August 31 email from Diana Bobo, Attachment 1.6.

¹³ August 29 email from Lenny Tinker, Attachment 1.7.

¹⁴ Kern, Rebecca, “Nixed Solar Grant Opportunity Cost \$500,000, Drawing Hill Scrutiny,” December 4, 2018, <https://news.bloombergenvironment.com/environment-and-energy/nixed-solar-grant-opportunity-cost-500-000-drawing-hill-scrutiny-1>

Secretary for EERE, approved the FOA in November 2017. Earlier in 2017, DOE instituted a new approval process for financial assistance actions, including for FOAs, to ensure that all new work funded by the department was consistent with the administration’s priorities.¹⁵ A February 2018 Government Accountability Office report noted that “DOE officials said that a key benefit of the fiscal year 2017 review process was an opportunity to better identify and coordinate future financial assistance department-wide on crosscutting issues” and “DOE plans to review fiscal year 2018 financial assistance *prior to issuing funding opportunity announcements to the public* [emphasis added], and thus before any recipients apply or are selected”.¹⁶ Therefore, the FY18 solar FOA must have undergone review through the new process and received the political stamp of approval to be released.

Despite this, Ms. Tripodi, an acting political appointee, was able to upend the process and cancel the FOA. Furthermore, EERE amended the manual that governs the FOA-approval process on August 31, 2018, the same day that Topic 1 was canceled.¹⁷ Though the details of the approval process changes were not available in the Democracy Forward productions, the timing of the change is suspicious. It raises the question of whether EERE followed the original set of procedures when canceling and reissuing the Topic 1 FOA or instead amended the rules to be able to cancel and reissue the FOA. It also brings into question the role of political appointees in changing the details of financial assistance outside of the designated review process.

While the revised FOA was eventually issued and the funds were distributed, the events that transpired in the canceling and reissuing of Topic 1 are indicative of deeper problems in DOE’s structure and procedures under this leadership that allow political appointees to upend financial assistance processes and potentially change these processes to suit political outcomes. We encourage the committee to explore steps it can take to ensure the growing EERE budget is managed with scientific integrity and without undue political influence.

Spending Patterns at ARPA-E and EERE

Persistent delays in EERE and ARPA-E spending over the last three years are damaging to the success of the programs and hint at the profound influence of the political agenda of the administration, which has proposed elimination of ARPA-E and disastrous cuts to EERE in the budget request each year.

The first incident of delayed spending arrived promptly in the new administration. In December 2017, the Government Accountability Office (GAO) found that ARPA-E had impounded—or intentionally withheld—\$91 million of appropriated funds in FY17.¹⁸ DOE leadership instructed ARPA-E to withhold \$91 million of FY17 funds “in anticipation of congressional enactment of the legislative proposals in the [president’s FY18] budget request.”¹⁹ The FY18 budget request proposed to eliminate ARPA-E, canceling

¹⁵ Government Accountability Office, “New Process to Review Financial Assistance for Research Projects Created Uncertainty,” February 2018, <https://www.gao.gov/assets/700/690391.pdf>.

¹⁶ Ibid.

¹⁷ DOE FOA Development Standard Operating Procedure EERE S 540.110 in the productions, Attachment 1.8.

¹⁸ Government Accountability Office, “Impoundment of the Advanced Research Projects Agency-Energy Appropriation Resulting from Legislative Proposals in the President’s Budget Request for Fiscal Year 2018,” December 2017, <https://www.gao.gov/assets/690/688941.pdf>.

¹⁹ Ibid.

\$46 million in FY17 funds and using \$45 million of unobligated funds to close out the agency.²⁰ Though the budget request was fully rejected by Congress, DOE used it as a justification to restrict deployment of ARPA-E funds.

This incident raised alarms for NRDC because of the potential that DOE could be withholding or delaying spending throughout the clean energy programs. As a result, in 2018, we began reviewing publicly available data to track spending by EERE and ARPA-E, and we quickly found additional delays. We compiled these data based on grant announcements in EERE Exchange, ARPA-Exchange, grants.gov, the EERE and ARPA-E websites, and information from budget requests.

In December 2018, we found that EERE and ARPA-E were behind on spending their FY18 appropriated funds. Our analysis suggested that, as of the beginning of December 2018, two months after the end of FY18, ARPA-E had not spent 79 percent of its FY18 budget, and EERE had not spent 14 percent.²¹ Several technology offices were behind their stated schedules for selecting projects to award funds. For example, the Water Power Technologies Office was scheduled to award \$25 million in FY18 funds by September 2018 but had only awarded \$3 million of that total by December.

After the publication of our analysis in December 2018, EERE and ARPA-E released more FY18 funds, though ARPA-E still was allocating FY18 funds at the end of January 2019, four months after the end of the fiscal year.²²

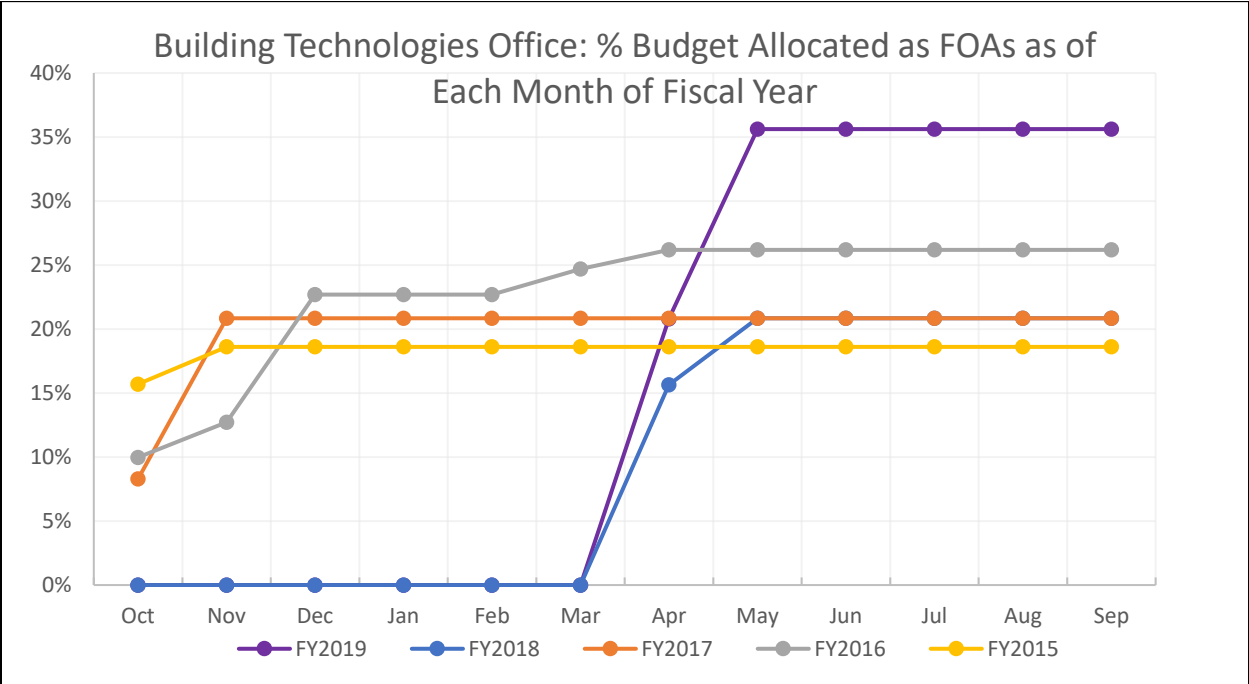
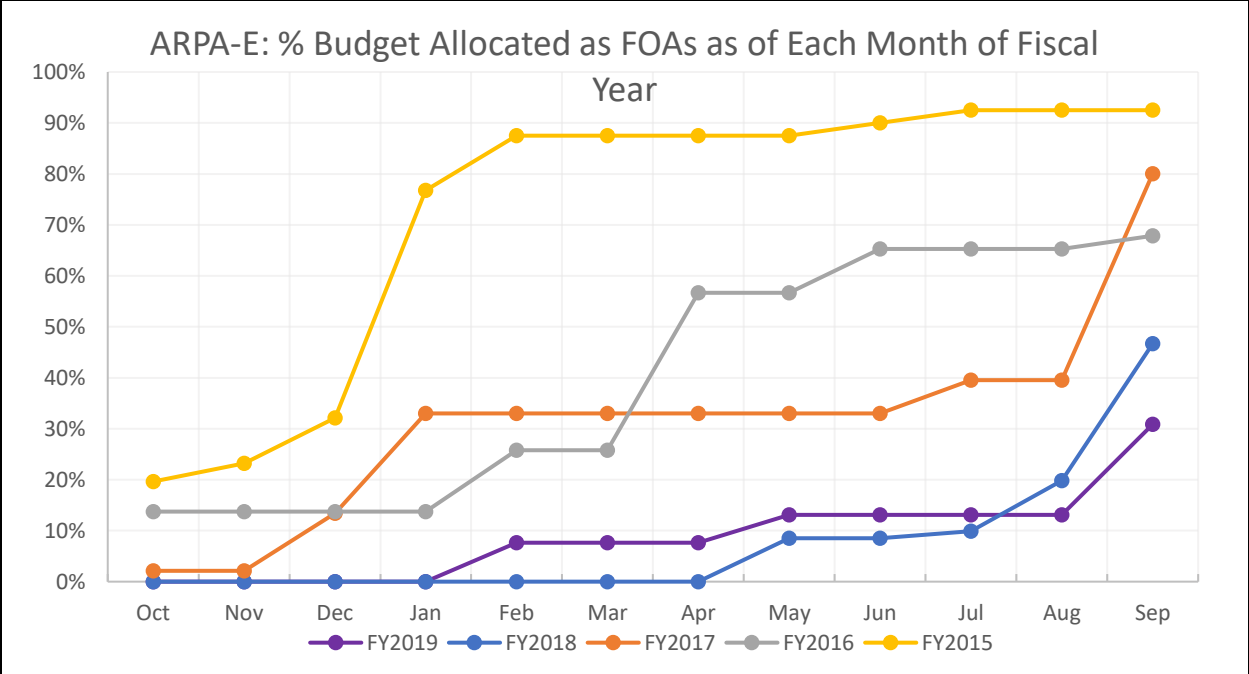
In October 2019, we updated our analysis to assess EERE's and ARPA-E's progress through the end of FY19. The data suggested that EERE was in a similar situation to the previous year, with about 4 percent of the office's funds unallocated and 18 percent unspent. Based on the publicly available announcements, ARPA-E was even worse off, with 48 to 68 percent of its funds unallocated and up to 91 percent unspent.

Our original analysis showed that several programs—including ARPA-E and EERE's building, solar energy, geothermal, and water power technologies offices—began releasing FY18 FOAs very soon after passage of the spending bill in March. That trend suggested that the delayed passage of the bill may have contributed to the delays in spending for FY18. However, several EERE offices released their FY19 FOAs on a similar delayed timeline as FY18, even though the FY19 spending bill was passed on schedule (for the first time in 9 years). In other words, FY19 spending was still delayed, despite the agency receiving appropriations on time.

²⁰ Ibid.

²¹ Wong, Jackie, and Madhur Bloor, "DOE Stalls Clean Energy R&D: Risking Jobs & Competitiveness," December 10, 2018, <https://www.nrdc.org/experts/jackie-wong/doe-stalls-clean-energy-rd-risking-jobs-competitiveness>.

²² <https://arpa-e-foa.energy.gov/Default.aspx?Archive=1#Foaldf22d5af9-3c00-4dc6-b1b2-53adf72d0841>



We also investigated spending trends in EERE and ARPA-E using the SF 133 Reports on Budget Execution and Budgetary Resources from the Office of Management and Budget. At the end of each fiscal year, EERE, ARPA-E, and other energy programs bring unobligated funds from previous appropriations into the budget for the upcoming year. EERE entered FY20 with \$820 million of unobligated funds from previous years, a \$171 million increase in carryover funds from the previous fiscal year. That means that

EERE’s carryover funds are equal to almost one-third of the office’s annual budget. ARPA-E entered FY20 with unobligated funds totaling \$411 million, or about the size of ARPA-E’s annual budget.

The magnitude of carryover funds is an indication of whether DOE is following congressional guidance and spending appropriated funds in a timely manner—and more carryover funds means less money from prior years is getting to clean energy innovators to do their work. A look back at prior years shows that, while EERE and ARPA-E have had significant carryover funds in the past, the unobligated balance EERE brought into FY20 is the largest sum in at least the past 10 years. Moreover, carryover funds in the preceding years were not accompanied by major rescission packages, like the one the Trump Administration proposed in 2018 to cancel \$15.3 billion in unobligated balances from prior years.²³

The high levels of unobligated funds suggest that DOE should take action to catch up on spending and get previously appropriated money out the door in line with Congressional direction. One action DOE can take is to increase staff levels, as I describe in detail next.

Unobligated Balances Carried Over into the Designated Fiscal Year ²⁴										
[\$M]	FY20	FY19	FY18	FY17	FY16	FY15	FY14	FY13	FY12	FY11
EERE	\$842	\$671	\$578	\$773	\$655	\$408	\$118	\$335	\$130	\$164
ARPA-E	\$411	\$450	\$256	\$231	\$244	\$210	\$222	\$159		

Staffing Patterns at EERE

NRDC’s analysis shows that EERE is understaffed relative to historical staffing levels. The office is neither filling open positions nor opening new positions at the needed pace. As a result, staff are overburdened, compounding the delays in funding, weakening morale, and increasing attrition that worsens the problem. We are concerned that delays in hiring are part of a political strategy to prevent EERE from issuing funds on time, given that every budget request under this administration has proposed to significantly cut EERE staffing numbers. Thankfully, the FY20 appropriations bill required EERE to make a plan to reach a staffing level of 650 full-time equivalents (FTEs) this year, up from an estimated 553 in 2019. We hope that Congress holds the agency to this requirement and continues to issue requirements for additional staff with further increases to the budget to ensure effective management of appropriated funds. Furthermore, it is important that DOE abide by a rigorous hiring process to staff up with well-qualified experts to manage the programs.

A robust federal workforce is essential to effective management of EERE funds. Staff must have the time and resources to make careful, well-informed decisions about what technologies and projects to invest in. Current staffing levels are too low for optimal management of the money Congress has appropriated—and may be about 40 percent lower than needed. The number of full-time equivalents (FTEs) at EERE has decreased consistently over the past six years, while funding for the office has

²³ Letter from Mick Mulvaney, “PROPOSED RESCISSION OF BUDGET AUTHORITY,” May 8, 2018, <https://www.whitehouse.gov/wp-content/uploads/2018/05/POTUS-Rescission-Transmittal-Package-5.8.2018.pdf>.

²⁴ Calculated based on SF 133 Reports on Budget Execution and Budgetary Resources from the Office of Management and Budget, <https://portal.max.gov/portal/document/SF133/Budget/FACTS%20II%20-%20SF%20133%20Report%20on%20Budget%20Execution%20and%20Budgetary%20Resources.html>, Accessed January 29, 2019.

increased. This has led to an increasing ratio of EERE funding to FTEs, as shown in the table and chart below. From 2015 to 2019, the ratio increased by 63 percent. If EERE were to achieve the same funding-to-FTE ratio today as it did in FY17, when the current administration took over, the office would need to be staffed at 950 FTEs. The office currently has about 60 percent of that total, by the most recent available estimates. That means that EERE staff can expend less time and fewer resources designing FOAs, reviewing applications, coordinating new efforts, and making the best decisions about what projects to fund. Understaffing of the office not only affects the effectiveness of spending but also decreases staff morale and creates a vicious cycle of attrition.

EERE Staffing and Funding Numbers						
Fiscal Year	FY14	FY15	FY16	FY17	FY18	FY19
FTEs (actual)	707 ²⁵	697 ²⁶	697 ²⁷	680 ²⁸	605 ²⁹	553 ³⁰
EERE Topline (\$M)	\$1,900,641 ³¹	\$1,840,847 ³²	\$2,069,194 ³³	\$2,040,249 ³⁴	\$2,321,778 ³⁵	\$2,379,000 ³⁶
Ratio (\$M/FTE)	\$2,688	\$2,641	\$2,969	\$3,000	\$3,838	\$4,302

²⁵ Department of Energy, “Department of Energy FY 2015 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2014/04/f14/Volume%203.pdf#page=278>

²⁶ Department of Energy, “Department of Energy FY 2017 Congressional Budget Request,” https://www.energy.gov/sites/prod/files/2016/02/f29/FY2017BudgetVolume3_2.pdf#page=264

²⁷ Ibid.

²⁸ Department of Energy, “Department of Energy FY 2019 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2018/03/f49/FY-2019-Volume-3-Part-2.pdf>, Page 225.

²⁹ Department of Energy, “Department of Energy FY 2020 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2019/04/f61/doe-fy2020-budget-volume-3-Part-2.pdf#page=225>

³⁰ If a 90 FTE reduction is equal to 14 percent, then the resulting current FTE value is about 553 FTEs. From Energy and Water Development Appropriations Bill, 2020, Report to accompany S.2470, <https://www.congress.gov/116/crpt/srpt102/CRPT-116srpt102.pdf#page=72>.

³¹ Department of Energy, “Department of Energy FY 2014 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2014/04/f14/Volume%203.pdf#page=20>

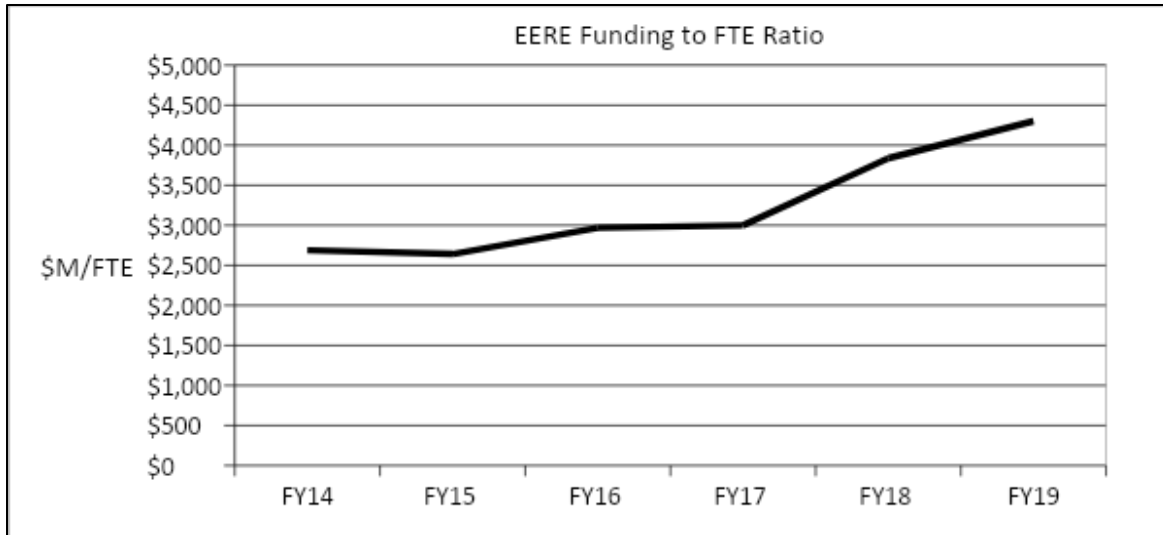
³² Department of Energy, “Department of Energy FY 2017 Congressional Budget Request,” https://www.energy.gov/sites/prod/files/2016/02/f29/FY2017BudgetVolume3_2.pdf#page=7

³³ Ibid.

³⁴ Department of Energy, “Department of Energy FY 2019 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2018/03/f49/FY-2019-Volume-3-Part-2.pdf#page=7>

³⁵ Department of Energy, “Department of Energy FY 2020 Congressional Budget Request,” <https://www.energy.gov/sites/prod/files/2019/04/f61/doe-fy2020-budget-volume-3-Part-2.pdf#page=7>

³⁶ Ibid.



It is striking and worrisome that an office with a growing quantity of unobligated money—which it needs to spend to comply with congressional direction—and a track record of delayed spending would not seek to hire more people to catch up on spending and instead would allow staffing numbers to decline. However, as I discuss next, this trend should not be surprising, given the political agenda of DOE leadership and the administration’s track record of trying to cut clean energy programs.

III. Mismanagement of EERE and ARPA-E aligns with the administration’s political agenda

We urge the committee to evaluate the management issues at EERE and ARPA-E in the context of the administration’s political agenda. Many of the management issues that EERE and ARPA-E have experienced over the last several years align with *explicit proposals* in the president’s budget requests.

First, the president’s FY18, FY19, and FY20 budget requests proposed to cut EERE funding by 71, 70, and 86 percent, respectively. Each budget proposal also has called for the elimination of ARPA-E. In this context, funding delays and the FOA cancelation appear to be part of a strategy to defy congressional direction and undermine the missions of these offices.

Moreover, the FY18 budget request proposed to use \$45 million of unobligated ARPA-E funds to cancel the ARPA-E program, and the FY20 request proposed to use \$353 million of unobligated EERE funds as a substitute for FY20 appropriations, effectively nullifying funds that Congress previously appropriated to the agency. It should come as no surprise then if DOE political appointees do not take action to address high levels of EERE unobligated funds carrying over each year or that ARPA-E was reprimanded for illegally impounding unobligated funds in FY2017.³⁷

Finally, each budget request has proposed to cut EERE staff, with the latest request proposing a 26 percent cut from the number of FTEs in FY19. Through the budget requests, the administration has been clear about its desire to reduce federal clean energy staff, and the declining number of staff in EERE tracks with this agenda.

³⁷ Government Accountability Office, 18.

On top of expressing a desire for EERE cuts in the budget, DOE leadership has exerted greater political control over the office through political appointments to positions formerly held by career staff. In 2019, EERE installed its first-ever politically appointed Deputy Assistant Secretary, followed weeks later by its second.^{38,39} In both cases, the new political appointees replaced career employees to run large swaths of the office, one to oversee the renewable power programs (solar energy, wind energy, geothermal technologies, and water power) and the other to lead the energy efficiency programs (building technologies, advanced manufacturing, weatherization and intergovernmental programs, and federal energy management). Moreover, in one case, the new appointee held the joint roles of Deputy Assistant Secretary and Chief of Staff to the Assistant Secretary.

When considered in the context of the administration's explicit agenda to squash EERE and ARPA-E, the mismanagement of these programs is doubly concerning and merits strong oversight, clear direction in appropriations language, and updated authorizations to ensure that the programs continue to operate in a way that advances clean energy solutions and brings greater benefits to the American people.

IV. The Path Forward

Despite the management challenges at EERE and ARPA-E, the programs have continued to fund important and impactful work over the last several years—thanks to continued support from Congress for DOE in the appropriations process. NRDC's April 2019 issue brief, *The Department of Energy's Clean Energy Investments Are Catalyzing Innovation Nationwide*, highlighted clean energy investments made by EERE and ARPA-E in every state of the country in 2017 and 2018.⁴⁰ We ask the committee to please add this brief to the record.

However, maximizing the benefits of DOE clean energy programs to the American people at a time when there is a need to urgently respond to the climate crisis requires addressing the persistent management and funding issues with EERE and ARPA-E. To do so, Congress should start by keeping a close watch on EERE through more regular oversight hearings and calling for investigations into examples of potential mismanagement, like the cancelation of the solar FOA. Congress should confirm that DOE follows through on its requirement to increase FTEs and continue to ask DOE for progress reports on spending and staffing. In addition, Congress should provide specific language in appropriations legislation to ensure appropriated funds are spent in a timely manner to address critical challenges for the energy system and combat climate change.

Even with those steps, the long-term solution to these issues requires an update to EERE's statutory authorization. As the committee knows well, the mandates for many EERE programs have not been updated in 15 years. As we noted in our recent report, *Transforming the U.S. Department of Energy in Response to Climate Change* (we ask the committee to please add this report to the record), updated authorizing legislation could modernize the mission of the agency to explicitly include addressing climate

³⁸ Northey, Hannah, "DOE: Ex-EPA adviser picked for top renewables job," May 10, 2019, <https://www.eenews.net/energywire/stories/1060304607>.

³⁹ Brugger, Kelsey and Hannah Northey, "DOE: Political hire promoted to oversee energy efficiency," June 4, 2019, <https://www.eenews.net/stories/1060480019>.

⁴⁰ Bloor, Madhur, "Transforming the U.S. Department of Energy in Response to the Climate Crisis: Legislative Authorization Principles for Clean Energy Innovation," April 1, 2019, <https://www.nrdc.org/experts/madhur-bloor/doe-catalyzes-clean-energy-innovation-all-50-states>.

change and recalibrate the goals and priorities for each technology office with the present challenges and opportunities, which will help limit political influence over FOAs.⁴¹ It could also reduce political influence over FOA decisions by reforming review processes and who is able to amend the FOAs—or by mandating Deputy Assistant Secretary and Assistant Secretary positions be filled with members of the career Senior Executive Service Corps, a government-wide pool of high-performing individuals selected for their leadership qualifications that includes the government’s best technical and scientific managers.

Moreover, any reauthorization must also significantly increase funding for clean energy research and development and create new programs for demonstration and deployment in order to match the scale of the climate crisis. With significantly more money in DOE’s budget, it will be even more important to put in place structures and procedures to make sure the agency is spending funds on time, following congressional direction, and maintaining enough staff to spend money effectively.

Our report includes a wider set of recommendations to reauthorize EERE and OE to better address the climate crisis. Many of our recommendations relate to management of the agency and are designed to help the agency operate more effectively. For example, our recommendations include:

- Establishment of a single Under Secretary for Science and Energy to coordinate efforts across basic science and applied energy programs;
- Creating Assistant Secretary positions for sustainable transportation and buildings and manufacturing and significantly increasing funding for these technology areas;
- Requiring long term portfolio planning across the agency; and
- Making addressing climate change and improved U.S. clean energy manufacturing explicit goals of the agency.

Many of the members on the committee are already championing bills to update EERE and ARPA-E authorizations, and NRDC appreciates their efforts.

We look forward to working with you on these issues. Thank you for your time and the opportunity to testify.

⁴¹ Shah, Tarak, and Arjun Krishnaswami, “Transforming the U.S. Department of Energy in Response to the Climate Crisis: Legislative Authorization Principles for Clean Energy Innovation,” November 13, 2019, <https://www.nrdc.org/resources/transforming-us-department-energy-response-climate-crisis-legislative-authorization>.

ATTACHMENTS

Attachment 1: Records produced as part of Freedom of Information Act litigation brought by Democracy Forward against the Department of Energy regarding the cancelation of the FY18 Solar FOA.

The following images are selected productions related to the FOA cancelation. The full set of productions will be posted online before the hearing.

1.1

From: Fitzsimmons, Alexander
Sent: Tuesday, July 10, 2018 3:51 AM
To: Tripodi, Cathy
Subject: FW: FOAs
Attachments: FY18 FOAs (7-9-2018).xlsx; AMO- Desal NOI- 1949 (FOA-0001905).pdf; GTO - DRAFT - Machine Learning FOA (FOA 1956).docx; WETO - Advanced Wind R&D FOA (FOA 1924).docx; OWIP - FY17 SEP Comp MERIT REVIEW ADVISORY REPORT_7-6-18_draft.docx

We should discuss

From: Jacob, Bindu <Bindu.Jacob@ee.doe.gov>
Date: Monday, Jul 09, 2018, 9:06 PM
To: Fitzsimmons, Alexander <Alexander.Fitzsimmons@ee.doe.gov>
Cc: Pezzullo, Leslie <Leslie.Pezzullo@ee.doe.gov>, Jayne, Kevin A. <Kevin.Jayne@ee.doe.gov>
Subject: FOAs

Alex,

The full list of FOAs for FY18 is attached in the FY18 FOAs Excel file. We went through and color coded to make this as easy as possible.

Currently we only have six FOAs that have yet to be posted and 21 FOAs that have been posted. Of the 21 that have been posted, we've announced selections for six of them already.

Please keep in mind that the majority of the FOAs that have already been posted have also already closed and are in merit review. It is too late to change any of the criteria for any FOAs that have already closed. If we were to change the criteria for any that are still open, we'd need to publish a FOA amendment and extend the open timeframe for all applicants. We only have five that are still open and four of those close within the next 2 weeks, making it extremely difficult to make any changes at this point. The fifth is the BENEFIT FOA, but they collected concept papers with a deadline of 6/8, and restrict eligibility on full applications without a concept paper (b) (5)

1.2

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

1.3

From: Hamos, Ian
Sent: Monday, August 20, 2018 9:55 AM
To: Gay, Charlie <Charlie.Gay@EE.DOE.Gov>
Subject: Tim's Summary of Meeting with EE-1

Charlie,

Tim did meeting with EE-1 on Friday, and managed to discuss a couple solar items. Below are his readouts, which both require action from us that Tim asked me to get started.

- Solar FOA Language: EE-1 is still awaiting changes from OE-1 regarding Topic 1. (b) (5)
Please let me know thoughts on such action.
- Solar Prize Briefing: EE-1 would like to see the 5 awards put into the standard template that was created for FOAs and then be re-briefed using that form.

I'm here to talk through anything you like, and happy to brainstorm/review as needed.

1.4

Rodriguez, Susan (CONTR)

From: Unruh, Timothy
Sent: Tuesday, August 21, 2018 6:35 AM
To: Tripodi, Cathy
Cc: Fitzsimmons, Alexander;Hamos, Ian
Subject: Solar Language

Importance: High

Do you have any update on the language in the Solar FOA? Last Friday you indicated that it was still under consideration by Bruce Walker. They are holding the Federal Consensus Panel this week, so any information at this time would be useful.

Thanks.

1.5

From: Passarelli, Derek
Sent: Monday, August 27, 2018 6:41 PM
To: Tripodi, Cathy <Cathy.Tripodi@hq.doe.gov>
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)

(b) (5)

From: Tripodi, Cathy
Sent: Monday, August 27, 2018 2:18 PM
To: Passarelli, Derek <Derek.Passarelli@ee.doe.gov>
Subject: Misc1.docx

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

<< File: Misc1.docx >>

1.6

From: Bobo, Diana
Sent: Friday, August 31, 2018 1:03 PM
To: Passarelli, Derek
Cc: Carabajal, Stephanie
Subject: RE: SETO Notice and Notice of Intent

The NOI has been posted on EERE Exchange. Below is the link.

<https://eere.exchange.energy.gov/default.aspx#Foald2bbe24fe-f075-4d1b-8ab7-0df723807696>

The Notices have been sent via email.

Please let me know if you have any questions.

Thank you,
Diana

From: Passarelli, Derek
Sent: Friday, August 31, 2018 12:59 PM
To: Bobo, Diana <Diana.Bobo@ee.doe.gov>
Cc: Carabajal, Stephanie <Stephanie.Carabajal@ee.Doe.Gov>
Subject: RE: SETO Notice and Notice of Intent

Diana,

You may proceed with issuing the Notices and posting the NOI at 1 pm. Please confirm when the actions have been taken.

Thank you.

Derek

1.7

From: Tinker, Lenny
Sent: Wednesday, August 29, 2018 9:48 AM
To: Ulrich, Elaine <Elaine.Ulrich@ee.Doe.Gov>; Jones-Albertus, Becca <Becca.Jones-Albertus@ee.doe.gov>; Kane, Victor <Victor.Kane@EE.Doe.Gov>; Gay, Charlie <Charlie.Gay@EE.DOE.Gov>
Subject: RE: SETO FOA Topic 1 Cancellation Notice - Federal funds already expended

Hi Elaine, (b) (5) Reviewer compensation alone was almost this much and during the FOA meeting, we were estimating several person years of DOE staff and contractors (giving a total closer to \$1M of federal fund expenses).

Victor: Based on your prior workload analysis, (b) (5) I think it is important to clarify to total federal funds already expended on this topic that had prior approval in this administration.

-Lenny

1.8

FOA Development Standard Operating Procedure
EERE S 540.110
Issued on August 31, 2018



Signature

Bindu Jacob
Acting Director, Project Management Coordination Office
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy