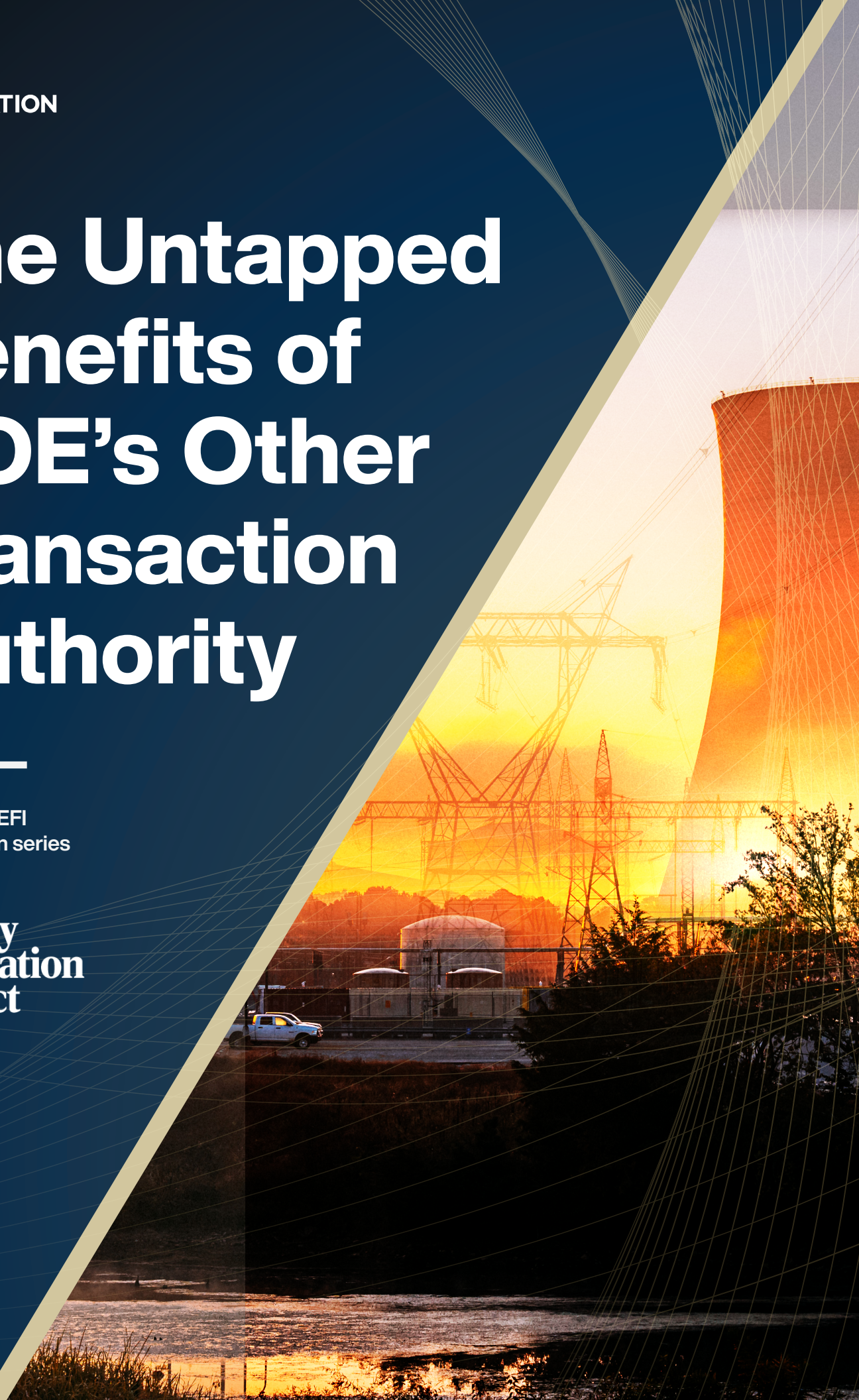
EFI FOUNDATION

The Untapped Benefits of DOE's Other Transaction Authority



Part of an EFI Foundation series

The Energy Innovation Project

Acknowledgments

Project Team

Authors

Keith Boyea . . . . . *External Advisor, keith.boyea@gmail.com*

Katelyn O'Dell Dean . . . *Senior Research Lead, EFI Foundation, kodean@efifoundation.org*

Alex Kizer . . . . . *Executive Vice President, EFI Foundation, agkizer@efifoundation.org*

Sarah Frances Smith . . . . *Deputy Director for Energy Innovation, EFI Foundation, sfsmith@efifoundation.org*

Akhila Mullapudi . . . . . *Research Analyst, EFI Foundation, asmullapudi@efifoundation.org*

Rachel Holzer . . . . *Associate, EFI Foundation, rnholzer@efifoundation.org*

Additional Contributors

Joseph S. Hezir . . . . . *President and CFO*

Communications Team

Lizi Bowen . *Deputy Director of Communications*

Paddy Ryan . . . . . *Managing Editor*

Alex Miller . . . . . *Communications Associate*

External Contributors

Matt Mansfield . . . *CEO, MG Strategy + Design*

Ben Cunningham . . . . . *Designer, MG Strategy + Design*

The EFI Foundation does not provide legal advice. None of the following analysis should be considered legal advice.

Report Sponsor

The EFI Foundation would like to thank Founders Pledge for sponsoring this work. The views expressed are those of the authors and should not be attributed to Founders Pledge. The EFI Foundation is solely responsible for the content of this paper.

Founders Pledge

Table of Contents

EFI FOUNDATION

The EFI Foundation is an independent, nonpartisan leader tackling the toughest energy challenges of our time. Under the leadership of Ernest J. Moniz, the 13th U.S. Secretary of Energy, the EFI Foundation conducts rigorous research to accelerate the transition to a low-carbon economy through innovation in technology, policy, and business models. The EFI Foundation maintains editorial independence from its public and private sponsors.

Citation and Copyrights

EFI Foundation, *The Untapped Benefits of DOE's Other Transaction Authority*, May 2026.

Photos from iStockphoto.com unless otherwise noted.

The Untapped Benefits of DOE's Other Transaction Authority

The U.S. Department of Energy (DOE) is the federal government's primary enabler of public and private investments in energy innovation. Congress sets DOE's mission through program authorization and appropriations. Congress also authorizes the funding mechanisms that DOE can use to find, negotiate, and contract with energy innovators. DOE experts then employ these mechanisms to identify and fund the private sector companies and projects best suited to turn federal resources into results.

Funding mechanisms typically used by DOE include grants, prizes, cooperative agreements, and contracts—all of which are defined by federal processes, including the Federal Acquisition Regulation (FAR). A few federal agencies, including DOE and NASA, were also given authority by Congress to enter into other types of agreements not governed by FAR. Often called "other transactions (OTs) authority," this funding mechanism provides federal agencies with significant flexibility to execute programs and deliver on their mission.

As DOE's mission becomes more focused on commercial deployment, the department must exercise the flexibility afforded by its OT authority. Yet, historically, DOE has rarely used its OT authority unless directed by Congress for a specific policy or program.

To advance discussions between policymakers, innovators, and investors on beneficial, practical applications of OT agreements, the following analysis provides a brief history of OT agreements at DOE, compares the OT agreement negotiation and award process to traditional awards processes, and offers a specific example of how OT agreements can enable commercially oriented approaches to advancing American energy innovation.

A Brief History of OT Agreements at DOE

DOE has had OT authority since the department's creation in 1977. The authorizing language emphasizes the secretary of energy's discretion to use funding agreements that enable the department's mission:

> *The Secretary is authorized to enter into and perform such contracts, leases, cooperative agreements, or other similar transactions with public agencies and private organizations and persons, and to make such payments (in lump sum or installments, and by way of advance or reimbursement) as he may deem to be necessary or appropriate to carry out functions now or hereafter vested in the Secretary.*[a]

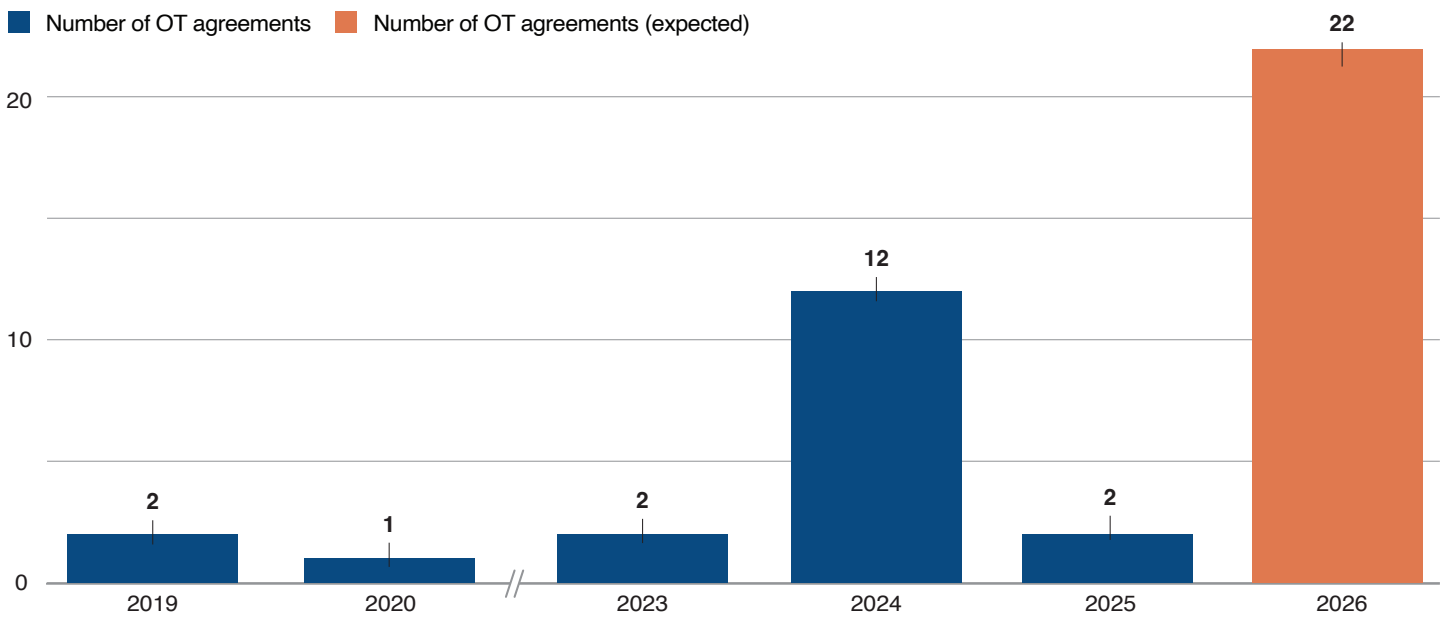
a Section 7256(a), DOE Organization Act of 1977.

Historically, DOE's energy innovation work has focused on early stage technology development. This has changed in recent years, as Congress directed DOE to support end-to-end innovation across the research, development, demonstration, and deployment pipeline. DOE has been appropriated unprecedented resources to achieve this aim, including $61 billion of funding for energy projects through the 2021 Bipartisan Infrastructure Law (BIL). Yet, DOE's progress implementing this funding has been slow. By March 2025, over three years after the law's passage, less than 5% of DOE's BIL funding had reached the private sector.[b] DOE's slow spending of its energy innovation budget is due, in part, to the department's overreliance on traditional funding mechanisms for commercial-scale projects.

Grants, cooperative agreements, and contracts have been effective tools for DOE's research and development work, and even early stage demonstration projects. However, they were ill-suited for many commercial-scale projects funded by BIL. While DOE has the authority to employ OT agreements—which may be better suited for commercial-scale projects—it has rarely leveraged the flexibility in award processes afforded by this authority.

Since fiscal year 2017, DOE has issued only 19 total awards using OT agreements, representing less than 1% of the total awards (16,666) over that time period (Figure 1).

Figure 1: **ACTIVE AND EXPECTED PROJECTS USING OT AGREEMENTS AT DOE, FISCAL YEARS 2017-2026**



Notes: Data are from the USAspending.gov "other financial assistance" category and public announcements from DOE. OT agreements are listed here by performance start date. EFIF's analysis includes OT agreements in DOE's science and energy innovation offices from October 2016 to December 2025 and expected OT agreements announced by DOE from February 2025 to March 2026. Expected OT agreements represent selected projects for funding opportunities and programs that stated intent to use OT agreements. Partnership Intermediary Agreements are excluded from this analysis See appendix for the full methodology.

Source: EFIF analysis of USAspending.gov data and public announcements from DOE.

b See EFIF's June 2025 report, ***Modernizing American Energy Innovation***.

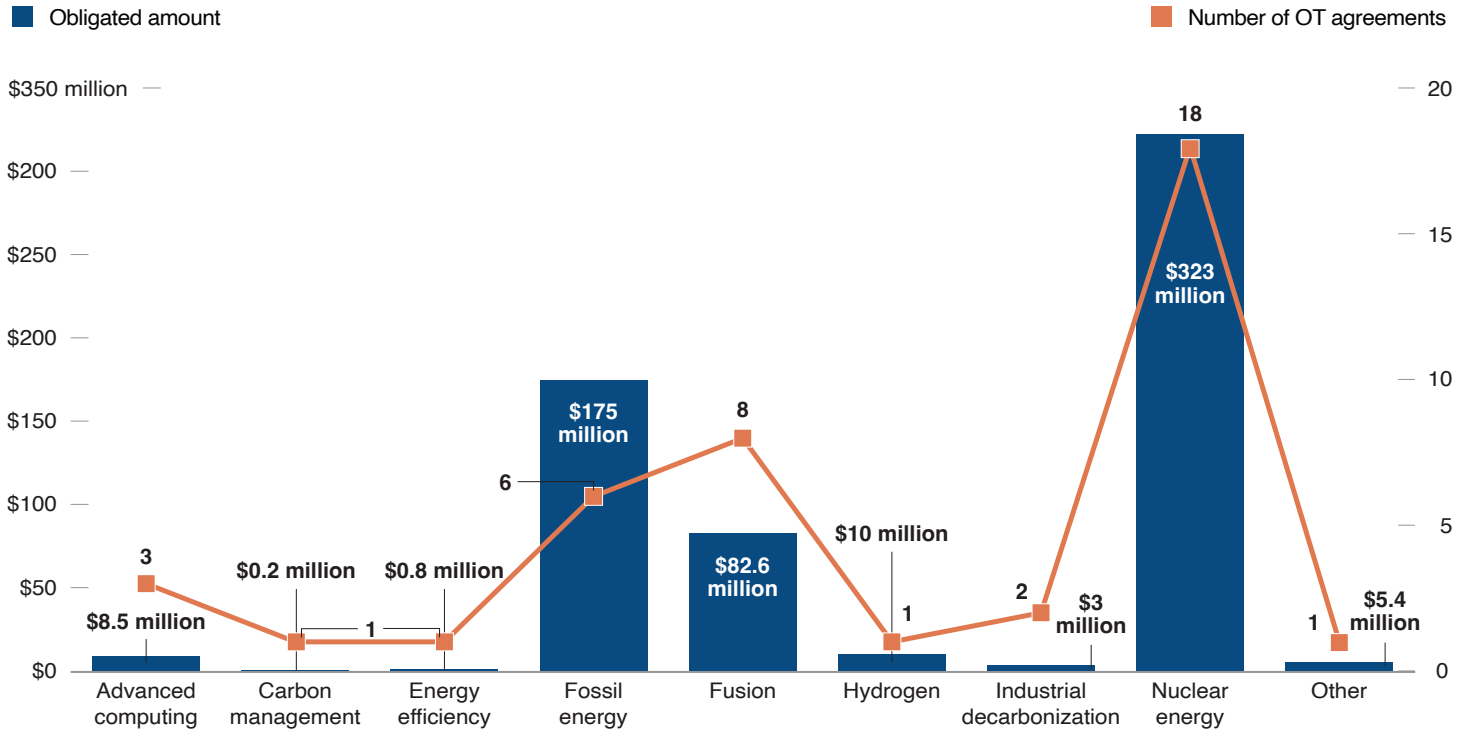
In recent years, DOE has used slightly more OT agreements, driven largely by Congress. The Energy Act of 2020 explicitly calls for DOE to use milestone-based agreements for certain nuclear energy projects using the department's OT authority from the Energy Organization Act:

> *"The Secretary shall establish … a milestone-based fusion energy development program that requires projects to meet particular technical milestones before a participant is awarded funds by the Department."*

Fusion and nuclear energy projects account for 65% of all DOE OT agreements since 2016 (Figure 2), likely because of this congressional direction.

DOE has used OT agreements for other technologies, including hydrogen and carbon management. For example, the EFI Foundation signed an OT agreement with DOE in Spring 2024 to establish the **Hydrogen Demand Initiative**. The EFI Foundation was selected for this program in January 2024, after DOE ran an open competition via a request for information in July 2023, followed by a request for proposal in September 2023. The OT agreements negotiations took less than six months and included a plan for milestone-based payments with clear performance parameters. This structure created financial protection for both parties with a pre-fixed total award value, unlike traditional cost-shared cooperative agreements.

Figure 2: **DOE'S USE OF OT AGREEMENTS BY TECHNOLOGY, FISCAL YEARS 2017-2026**



Notes: Data are from the USAspending.gov "other financial assistance" category and public announcements from DOE. OT agreements are listed here by performance start date. EFIF's analysis includes OT agreements in DOE's science and energy innovation offices from October 2016 to December 2025 and expected OT agreements announced by DOE from February 2025 to March 2026. Expected OT agreements represent selected projects for funding opportunities and programs that stated intent to use OT agreements. Partnership Intermediary Agreements are excluded from this analysis. See appendix for the full methodology.

Source: EFIF analysis of USAspending.gov data and public announcements from DOE.

In 2026, DOE's number of OT agreements is expected to more than double compared to 2024. Under the Trump administration, the department has released multiple funding opportunities which explicitly plan to use OT agreements to expedite technology deployment and protect taxpayer dollars.

In June and July 2025, DOE released requests for applications (RFAs) for its Pilot Reactor Program and Fuel Line Pilot Program which stated intent to use OT agreements.[c] DOE has since selected 16 projects to participate in the two programs. The new OT agreements do not employ a unique financial structure—in fact, they have no attached funding. As the RFA states:

> *"DOE chose [Other Transactions] to provide maximum flexibility and efficiency to implement this program … The terms … will be crafted to streamline regulatory requirements and limit intellectual property (IP) rights to the government."*[d]

In September 2025, DOE announced it would use milestone-based OT agreements in its Restoring Reliability: Coal Recommissioning and Modernization program to expedite program execution while ensuring financial protection of taxpayer dollars. As stated in the notice of funding opportunity:

> *"Through milestone-based Other Transaction Agreements, DOE will ensure accountability and progress verification, while enabling rapid deployment of projects that reinforce U.S. grid reliability and energy security."*

The program has made six project selections, with additional selections anticipated later this year. Despite these increases in the use of OT agreements, their utility for developing commercially oriented award structures remains largely untapped by DOE.

c See DE-FOA-0003572 and DE-FOA-0003569.
d Stated in both the Fuel Line Pilot Program and Reactor Pilot Program RFAs.

Traditional Federal Awards Processes Aren't Designed for Commercial-Scale Projects

In 2025, the EFI Foundation conducted a series of interviews with companies that have negotiated traditional funding agreements with DOE. Many of these companies were planning to build a commercial-scale pilot or demonstration project, which DOE historically has less experience managing and funding. The result was a clear disconnect between DOE's traditional funding mechanisms and commercial sector needs. One company representative said that DOE does not "have contracts that are meant for large capital development." Another awardee similarly stated:

> *"Private companies are not set up to do FAR. There's a lot of pain to comply with federal regulations. It turns an engineering firm into an accounting firm."*

The traditional awards process—in addition to final award structures—is also not well suited for commercial-scale projects, particularly in emerging technology sectors. Under the Biden administration, DOE applied the standard, FAR-governed awards process to commercial-scale projects, resulting in excessively long award timelines, lengthy solicitations and scoring rubrics, and ill-suited award structures that left DOE's future partners frustrated and confused.

Federal regulations that cover traditional financial assistance (e.g., grants, cooperative agreements) require "full and open" competition.[e] This often involves posting solicitations publicly so that any organization or individual may submit a proposal. In theory, open competitions are supposed to increase the pool of applications, leading to higher quality proposals and lower costs for the government. This is often not the case, however, for many commercial-scale programs, as federal regulations and traditional funding mechanisms limit the pool of eligible applicants and increase project selection timelines and overall costs.

DOE often begins a funding solicitation under the traditional process with an open-invite webinar where any interested party may attend and ask questions. The DOE staff uses this call to describe the award criteria and the process for navigating the FAR. However, DOE staff may not be at liberty to answer all questions asked during the call due to concerns over managing an open, fair competition under FAR.

Sensibly, the review processes for traditional awards are designed to provide staff with unbiased, quantitative rubrics. A funding opportunity announcement (FOA) for traditional award structures has an "application review information" section with a scoring methodology that can exceed 10 pages. There are a number of weighted criteria (often between four to six) against which applicants are assessed, with each criterion containing between five to 10 sub-bullets outlining expectations or eligibility. However, due to the diversity of commercial-scale projects at various stages of development, the scoring metrics for quantitative information were often qualitative in nature, lacking objective evaluation criteria.

e *The Uniform Guidance*, https://www.ecfr.gov/current/title-2/subtitle-A/chapter-II/part-200.

For example, the FOA for the Office of Clean Energy Demonstrations' Regional Clean Hydrogen Hubs lists "the degree to which the proposed H2Hub utilizes and leverages available regional resources to meet the FOA objectives" as a review criterion, rather than offering a more objective expectation.[f] FOAs for Inflation Reduction Act and BIL programs were required to include a category for community benefits plans, the scoring criteria for which were a frequent source of confusion for applicants. There were few quantifiable metrics and no template for such plans until a year after the BIL's passage.

This traditional process tends to favor large, well-resourced organizations over small ones, limiting the type of competition these processes are designed to create. Further, some emerging energy technology sectors have only a handful of active players who could even apply for a full and open solicitation in the first place. The small innovators may be the right organization for the job but struggle to keep up with the solicitation process, causing DOE to miss out on the best project partners.

With DOE's traditional award structures, there is often very little direct engagement between government staff and potential award partners. These are suboptimal conditions when the goal is finding the right partner. Any Q&A conducted between prospective applicants and the awarding office must be publicly disclosed for all competitors to see, causing many companies to hold back critical project information that they do not want disclosed publicly. In the case of large, commercial-scale projects, the lack of alignment on project details can lead to months-long negotiations. Delaying such projects threatens to impose significant negative consequences in a rapidly changing market.

f DE-FOA-0002779.

OT Agreements Enable a Commercial Approach to Energy Innovation

OT agreements offer a more efficient and effective approach to the awards process for commercial-scale projects. With OT agreements, DOE can collect extensive market intelligence prior to solicitation—including interviews with key industry players and future partners—and then only solicit organizations best positioned for the project, rather than posting an open call with limited prior private sector input. This change allows the government to conduct open exchanges with interested organizations (i.e., potential awardees) well before solicitations are finalized. The additional pre-solicitation market research helps DOE refine the solicitation and award structure, reduce time spent in formal proposal review and negotiation, and establish relationships with potential future partners. The process is also still considered competitive, since DOE is soliciting more applications than it will award.

Figure 3 provides an example of how DOE's OT authority could enable a commercially oriented approach to energy innovation.

Figure 3: **A COMMERCIALLY ORIENTED APPROACH TO ENERGY INNOVATION USING OT AUTHORITY**

Using OT agreements to structure competition and design fit-for-purpose, commercially oriented award structures involves three key steps:

1. Gather extensive market intelligence.
2. Engage with identified experts and future partners.
3. Solicit select organizations to apply.

First, DOE collects extensive market intelligence. In this case, market intelligence is not "market research" as described in FAR Part 10, which guides traditional solicitation writing; it is much more detailed. Gathering market intelligence for OT authority-enabled commercially oriented implementation goes well beyond posting a request for information on a government website and

reading responses. It requires DOE staff to read industry journals, go to industry conferences, and make connections with industry insiders, journalists, and subject matter experts in universities and nonprofits. Ideally, DOE would already have much of this expertise in-house and be adequately staffed to allocate resources to comprehensively map the market. However, in 2025, the department cut more than 3,000 employees from its workforce, reducing its ability to produce this type of market intelligence.[g]

To facilitate market intelligence, DOE can also leverage other types of OT agreements: partnership intermediary agreements (PIAs) and additional Other Transaction consortia, which foster relationships between energy technology organizations and DOE.

Second, the department openly engages with identified experts and potential partners about solicitation design. When using OT agreements, agencies are free to conduct open conversations with industry experts, including potential applicants.[h] DOE staff could solicit targeted advice on program design and ask direct questions on everything from a technology's commercial readiness to suggested proposal evaluation metrics. DOE staff should treat organizations engaged through this market intelligence as partners—not only because it shows respect and builds trust, but because they are the agency's potential awardees. Through market intelligence engagements, DOE staff can build lasting relationships and become better, more informed project partners after selections are made.

BIL-funded DOE project grantees interviewed by EFIF in 2025 indicated a desire for this style of partnership with the federal government. As one interviewee suggested:

> *"We need a DOE staff that understands the technology and commercial markets to guide these projects."*

Administering OT agreements with advanced market intelligence before solicitations begin enables DOE to act more like the project partner the private sector desires in commercial-scale projects.

Finally, the department selects—based on market intelligence—organizations to solicit.[i] Under this method of OT implementation, the solicitation is not required to be posted publicly. DOE can instead identify the most capable organizations for a certain program and invite them to apply directly.[j] Through this practice, DOE does not remove competition, but rather strategically narrows it to the most appropriate competitors identified through market intelligence. This method also eliminates the need for a time-consuming intermediate down-select step because the early evaluation work was already completed during pre-solicitation market intelligence gathering.

---

g For more analysis on adequate staffing levels and skillsets at DOE, see EFIF's September 2025 report, ***DOE Staff Crunch Slows American Energy Innovation***.

h Technically, this is true of acquisitions and financial assistance in the pre-solicitation phase, but it rarely happens—or, at least, does not happen enough.

i There is precedence for this. FAR Part 8.405-2 allows contracting officers to choose vendors to solicit when using federal supply schedules. Those solicitations need not be advertised publicly.

j A good rule of thumb, especially as projects get larger, is that agencies should not solicit more than four times the number of organizations as it has awards available. See: Merrow, E. W. (2023). *Contract strategies for major projects: Mastering the most difficult element of project management*, pg. 83.

Leveraging the flexibility afforded by its OT authority to engage early with organizations in target sectors enables DOE to take a commercial approach to energy innovation. This approach has significant benefits for DOE and private sector partners including:

1. Stronger public-private partnerships.
2. Improved, commercially oriented solicitations and award structures.
3. Increased government efficiency in the award-making process.

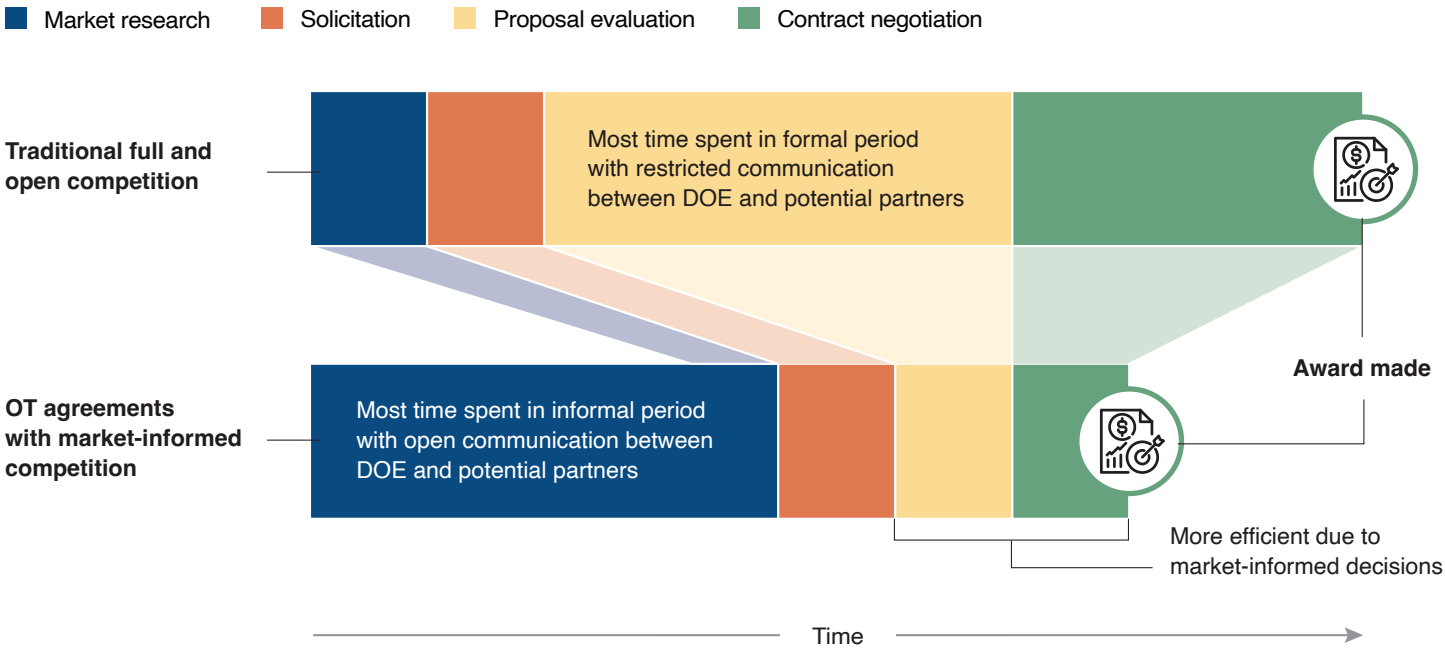
Stronger public-private partnerships: Early engagement with interested parties builds a strong foundation for productive partnerships. Shifting evaluative work to an informal period makes DOE's early communication with potential project partners more useful and collaborative because the conversations are more freewheeling and open. This openness helps align prospective partners' understanding of what the government values in a program earlier, reducing the risk of time-consuming misalignment during formal negotiations. The time spent on market intelligence not only builds relationships with future project partners; it also provides DOE staff with more time to build a stronger working knowledge of the sectors and technologies their programs are intended to support.

Improved, commercially oriented solicitations and award structures: Informal, pre-solicitation conversations would directly inform both the project and the solicitation. Before a project even starts, DOE will have collected lessons learned from market intelligence and industry engagement, which helps avoid the pitfalls of past projects. Further, pre-solicitation engagement also helps inform solicitation design, ensuring that the requested information and evaluation factors are well understood by applicants. It also increases applicant understanding of what DOE values in potential projects leading to better, more awardable proposals. Added market intelligence, improved solicitations, and clearly communicated values can then make it easier for DOE to identify the best proposals during evaluation and pick the best projects.

Increased government efficiency in the award-making process: With this use of OT agreements, program implementation becomes more efficient and less burdensome for commercially oriented programs. While DOE staff may do more work during the pre-solicitation phase than required by the traditional award process, the effort results in time savings later, from more efficient evaluations and negotiations. The busiest work periods in the traditional government solicitation process almost always happen with government and private sector partners working in silo.[k] The OT approach reduces the work done in silos by moving it to a pre-solicitation collaboration period where the parties are working together, rather than separately.

k "Are Other Transactions Faster or More Effective?" Keith Boyea, October 2025, https://substack.com/home/post/p-176028375.

Figure 4: **BREAKDOWN OF OVERALL TIME TO AWARD AGREEMENT, OT AGREEMENTS WITH MARKET-INFORMED COMPETITION vs. TRADITIONAL FULL AND OPEN COMPETITION**



Conclusion

The potential benefits of OT agreements extend well beyond the example discussed here. Although increasing OT use at DOE is not a silver bullet for all program implementation challenges, strategic use of OT agreements can deliver meaningful improvements across DOE's implementation process. This analysis highlights how DOE could use its OT authority to support more commercially oriented award processes—increasing efficiency, improving solicitation designs and award structures, and strengthening DOE's role as a project partner. Leveraged effectively, OT agreements can help DOE execute its expanded mission of end-to-end energy innovation and accelerate technologies across the full research, development, demonstration, and deployment pipeline.

Methodology

Data on DOE's existing OT agreements were downloaded from the USAspending.gov "other financial assistance" category. Data on DOE's planned OT agreements are from public funding opportunity announcements from DOE. EFIF only includes OT agreements which were funded and/or awarded by EFIF's list of science and energy innovation offices at DOE.[1] Data from USAspending.gov represent active contracts with performance start dates from fiscal year 2017 to December 2025 in science and energy innovation offices. PIAs and payments in lieu of taxes, identified using award descriptions and typical PIA awardees, are excluded from this analysis. Technology investment agreements are included. EFIF also reviewed DOE public announcements from February 2025 through March 2026 to identify new programs which plan to use OT agreements. Specifically, DOE's request for applications for its Reactor Pilot Program and Fuel Line Pilot Program and the broad agency announcement for its Coal Recommissioning and Modernization Program state that they expect to use OT agreements. Selected projects for these programs are included with an expected performance start date of 2026. While we expect those projects to begin in 2026, that has not yet been confirmed by DOE or the recipients. The 16 projects selected for the Reactor Pilot Program and Fuel Line Pilot Program are represented in the nuclear awards count but not the obligated amount because the agreements are not expected to include funding.

1 EFIF's list of science and energy innovation offices at DOE can be found in the September 2025 report ***DOE Staff Crunch Slows American Energy Innovation***.

www.efifoundation.org