

Open the Front Door

A Guide to Easing Access to DOE's Funding Opportunities

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This blueprint discusses structural challenges in federal funding and contracting practices, but those challenges are not a reflection on the dedication or capability of the U.S. Department of Energy workforce. Across offices, administrations, and roles, current and former DOE staff have consistently worked to improve programs and deliver results under significant statutory, budgetary, and operational constraints. Many of the promising practices described here exist because of their initiative and public service. We are grateful for their efforts and for the insights that informed this work.

We welcome questions, feedback, and further discussion. Please contact us at info@cleanecon.org.

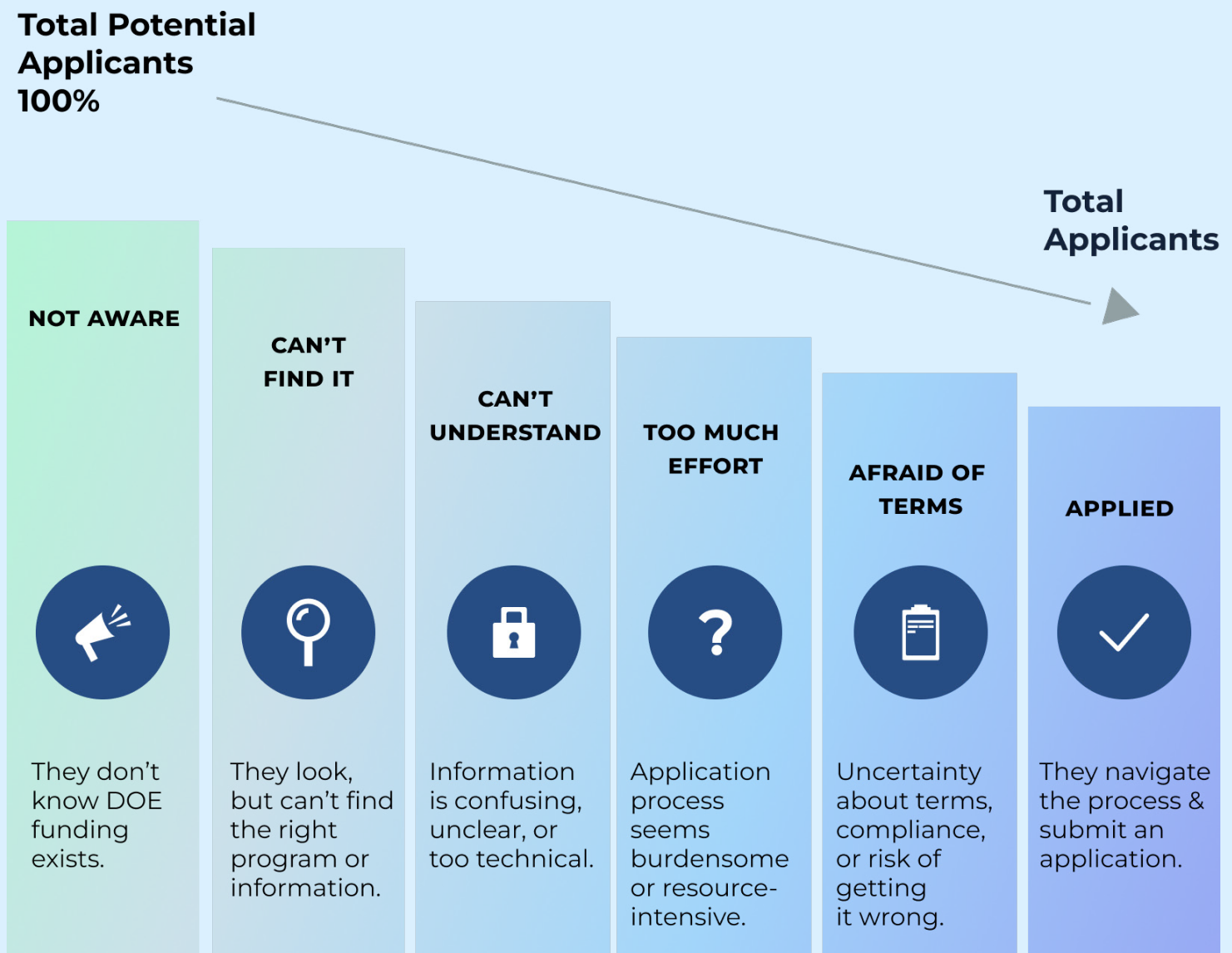
Table of Contents

Acknowledgements	1
Table of Contents	2
1. Executive Summary	4
2. How to Read this Blueprint	8
3. Setting the Stage	11
3.1 Why This Matters	12
3.2 Background: DOE Mission and Constraints	13
4. Background: The Applicant Journey	17
5. Blueprint to Widen DOE's Front Door	21
6. Barrier 1: Awareness and Accessibility	24
6.1 Funding Award Labyrinth	25
6.2 Digital Front Door	26
6.3 Human Front Door	28
7. Barrier 2: Information, Understanding, and Trust	29
7.1 Fragmented Information	30
7.2 Clear & Standardized Solicitations	31
7.3 Confidence in the Solicitation Process	32

8. Barrier 3: Application Burden and the Peril of Narrow Topics & Tools	34
8.1 Existing Barriers and Half Measures	36
8.2 Reducing Burden	37
9. The Operational Design	39
9.1 Centralized Online Portal for all DOE Funding Programs	40
9.2 Future Solicitation Schedule	42
9.3 Simplified, Standardized, and Transparent Application Architecture	43
9.4 Funded Intermediaries for Outreach and Application Support	44
9.5 Staged Application Process with Concept Papers as Default First Stage	46
9.6 Objective-Based Solicitation Tracks	47
Conclusion	49
Appendix 1: DOE Funding Mechanisms Defined	50
Appendix 2: How an Office Budget Winnows to New-Award Funding	52

Executive Summary

The Department of Energy (DOE) is America's primary engine for funding the full range of energy research, development, demonstration, and deployment (RDD&D), work critical to the national interest that no private actor could undertake alone. From strengthening energy security and grid resilience to accelerating the next generation of energy technologies, DOE's impact on the broader energy innovation ecosystem and market depends on the quality and diversity of the companies it engages.



Yet, for many companies, engaging DOE is harder than it should be. Funding opportunities are scattered across offices and websites with no single access point, no forward-looking schedule, and no outreach beyond DOE's existing network. The opportunities companies do find are written in opaque language that new entrants struggle to understand. Many programs skip any preliminary check on ideas like a concept paper stage, and require lengthy full applications upfront, forcing every applicant to spend significant resources before learning whether it has any chance of selection.

Other offices scope solicitations so narrowly that they exclude innovators whose approaches could meet the same objectives by a different path than the sponsoring office identified. Startups and companies that do make it through the application process face terms and conditions not shared until after selection, unpredictable review timelines, and legitimate but poorly explained agency concerns about intellectual property (IP), Freedom of Information Act (FOIA) exposure, and cost share requirements. As a result, the pool of companies willing and able to engage with DOE shrinks, as does DOE's ability to fulfill its mission.

Three barriers reduce the pool of companies able to engage effectively with DOE's mission.



- 1. Awareness and Accessibility.** Many companies that could contribute to national priorities never find a relevant funding opportunity, either because schedules aren't published far enough in advance, or because they never learn the funding exists at all (Section 6).
- 2. Information, Understanding, and Trust.** Some companies find federal funding opportunities but lack the information needed to make an informed decision about whether to apply (Section 7).
- 3. Application Burden and Narrow Topics.** Others decide to apply but face disproportionate effort, unclear processes, and solicitation topics scoped too narrowly to accommodate their approach (Section 8).

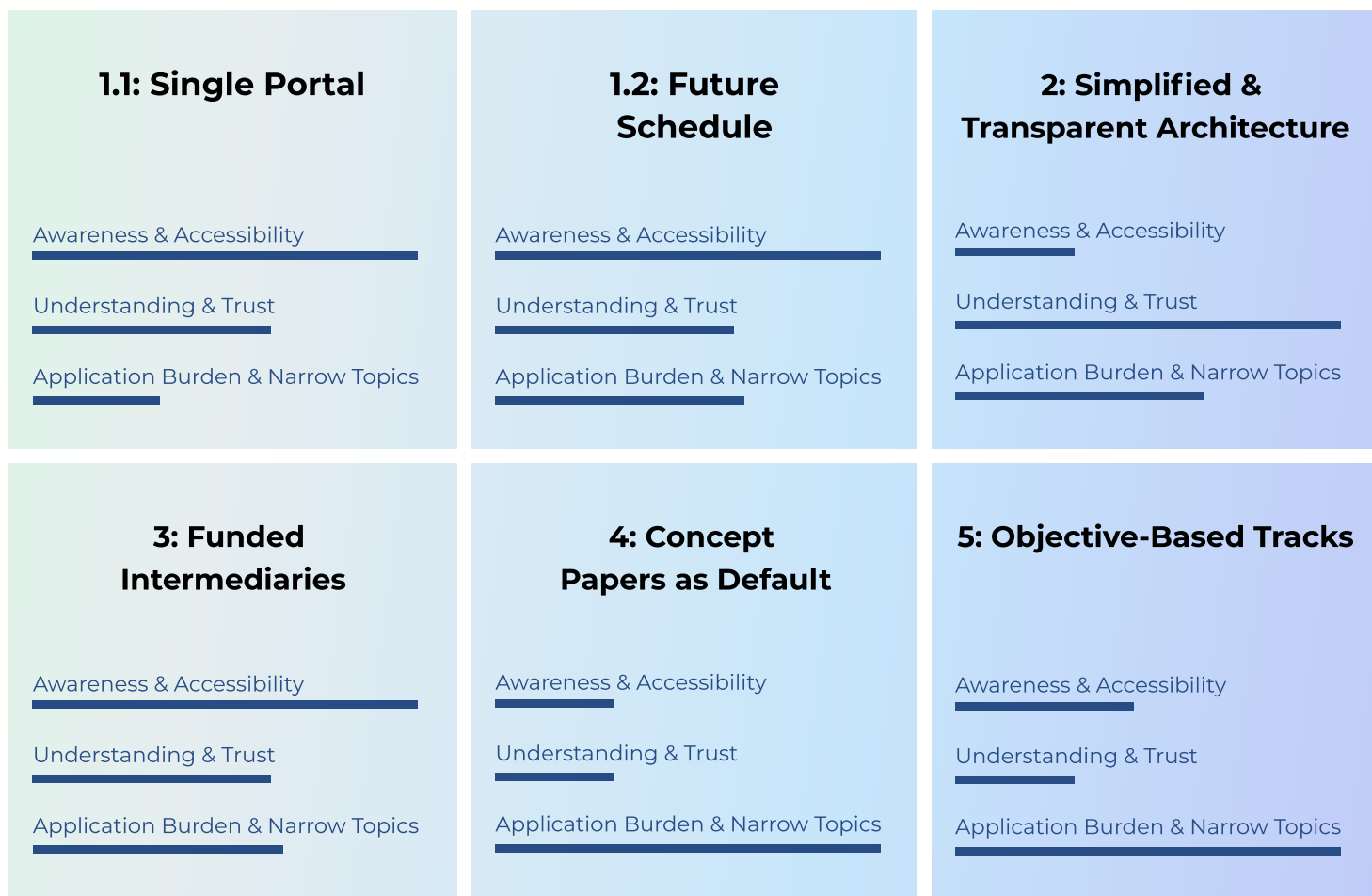
These barriers are especially difficult to solve because their impacts are invisible in DOE's own tracking and evaluation. Companies that never apply, stall out navigating federal processes, or self-select out before submitting never appear in program data.

Despite these barriers, effective models for opening the front door to federal support already exist within DOE. Individual offices have developed practices worth scaling, such as the former Solar Energy Technologies Office's real-time funding pages, the Office of Clean Energy Demonstrations application transparency, and the Advanced Research Projects Agency for Energy's (ARPA-E) open solicitations. The goal is to expand and improve systems DOE has in place to make federal support more accessible to the American innovators best positioned to advance U.S. energy and technology leadership (Section 3.3).

Five Reforms to Open the Front Door

We propose five reforms to improve front door access, all within DOE's existing administrative authority (Section 3.3), including some that could be operational within months. Each recommendation is detailed in the Blueprint's Operational Design (Section 9).

01	Digital Front Door: A Single Resource for Current and Future Funding.	1.1: Single Portal. A single searchable location for all DOE competitive funding across all mechanism types. 1.2: Future Solicitation Schedule. A forward-looking schedule of planned solicitations six to twelve months out, transforming DOE from a system innovators must react to into one they can prepare for.
02	Simplified, Standardized, and Transparent Application Architecture.	Application requirements right-sized to decision-essential information, with terms and conditions published alongside every solicitation and clear visibility into process and timeline from the outset.
03	Funded Intermediaries for Outreach and Applicant Support.	Systematic funding for organizations such as incubators, accelerators, or other entrepreneurial support groups that serve as a human front door, reaching innovators not actively searching for DOE funding and helping first-time applicants navigate the process. These intermediaries can also help companies navigate the complexity of managing federal awards, if successful.
04	Staged Application Process with Concept Papers as Default.	Lightweight first-stage submissions that protect applicant time, manage review volume, and give DOE an early signal on the expertise needed to evaluate full applications.
05	Objective-Based Solicitation Tracks.	Solicitations that define measurable outcomes without prescribing technology pathways, surfacing innovations DOE would not have thought to solicit directly.



The recommendations reinforce one another, and the full set is substantially more powerful than any single fix. A wider front door to federal awards does not mean a heavier workload for DOE; each solution is designed to benefit the department as much as the applicant (Section 5).

The constraints DOE operates under are significant. We distinguish between what is legally required, what is good practice, and what is institutional inertia hardened into false necessity (Section 3.2). The recommendations are calibrated to what DOE can do now, within existing authority.

The costs of a narrow front door are borne by everyone: by DOE through weaker applicant pools, by companies in forgone partnerships with the federal research enterprise, by the public, which misses market-ready technologies, and by the United States, which sees slower commercialization of the technologies that will define the next era of energy competition.

Meanwhile, that competition is intensifying. Global clean energy investment reached \$2.3 trillion in 2025, and for the first time, the European Union outspent the United States in energy transition investment. The speed with which the U.S. moves technologies from laboratory to market will determine whether America leads or follows in the decades ahead. Opening the front door to public investment is a prerequisite for DOE to fulfill its mission, and for the United States to compete.

How to Read This Blueprint

02

How to Read This Blueprint

This Blueprint is written for DOE leadership and program managers, Congressional staff, and the clean energy innovation community. It examines how companies engage with DOE from first awareness of a funding opportunity through submission of an application, focusing on the startups, small businesses, and new entrants that lack the institutional knowledge to navigate DOE's processes. It defines getting "through the front door" as the point at which a company understands DOE's goals, processes, and terms well enough to submit an application with reasonable confidence. Everything after submission falls outside that scope.

The Blueprint does not cover merit review, award negotiation, or post-award and portfolio management, all of which are topics for future work. Nor does it address the front door for non-business organizations such as universities, national laboratories, and nonprofits, which engage DOE through different pathways. These are important but distinct subjects, better addressed separately.

The following roadmap and section guide match audiences with the most relevant material.

Blueprint Roadmap — Where to Focus

Audience	Primary Value	Sections
DOE Leadership	Policy decisions and capacity building	1, 4, 5–8
Congressional Staff	Oversight, authorization, and appropriations context	1, 3, 4, 8
Program Managers & Contracting Officers	Practical guidance on FOAs and mechanism selection	5–8, Appendix
Startups & Companies	Realistic expectations and how to navigate DOE	3, 5–7, Appendix
Investors*	Due-diligence context; an award is not a signal of commercial viability	3, 6

*A note for investors: while this paper is written primarily for potential applicants and DOE stakeholders, investors seeking to understand DOE processes will find relevant content throughout.

SECTION 3	Setting the Stage	Defines the Blueprint’s scope, explains why widening DOE’s funding access matters, and frames DOE’s mission and constraints.
SECTION 4	Applicant Journey	Lays out what applicants see today when trying to find, understand and apply to DOE funding opportunities.
SECTION 5	Blueprint to Widen DOE’s Front Door	Introduces the five recommendations that widen DOE’s front door and the cross-cutting takeaways that connect them.
SECTION 6	Barrier 1: Awareness and Accessibility	Diagnoses how startups and companies struggle to find and reach DOE funding; recommends a stronger digital and human front door.
SECTION 7	Barrier 2: Information, Understanding, and Trust	Examines unclear solicitations and low confidence in the process. This section recommends clearer, standardized solicitations.
SECTION 8	Barrier 3: Application Burden and Narrow Topics	Addresses heavy application requirements and overly narrow topics and tools; recommends reducing burden and widening the applicant pool.
SECTION 9	The Operational Design	Translates the five reforms into concrete implementation guidance, from a centralized portal to objective-based solicitation tracks.
SECTION 10	Conclusion	Synthesizes the argument and frames the path forward for DOE.
APPENDIX 1	DOE Funding Mechanisms Defined	A reference glossary of DOE’s funding mechanisms for readers who want the underlying detail.
APPENDIX 2	How an Office Winnows to New-Award Funding	A high-level walk through of the competing priorities and inputs for formulating funding solicitations in DOE offices.

Setting the Stage

03

3.1 Why This Matters

The United States has long been a global leader in energy innovation, but the competitive landscape is shifting. Global clean energy investment reached a record \$2.3 trillion in 2025, up from less than \$1 trillion a decade earlier.¹ The race is no longer bilateral between the United States and China. The European Union invested \$455 billion in energy transition in 2025 (more than the United States at \$378 billion) while China led at \$800 billion and India's clean energy investment grew 30 percent year-over-year.² Japan has committed approximately \$1 trillion in public-private clean energy investment over ten years through its Green Transformation strategy³, and South Korea remains the dominant non-Chinese battery manufacturer while expanding nuclear exports. Across 32 countries, more than 80 new energy innovation policies were introduced in 2025 alone.⁴

Spending is only one measure. On the strength of national innovation systems (knowledge creation, enterprise formation, and policy support), the Council on Foreign Relations' 2025 Global Energy Innovation Index ranks the United States thirteenth of 39 nations, ahead of Japan (17th) and China (29th) but behind a field of smaller, innovation-intensive economies led by Sweden, Denmark, and Finland.⁵ U.S. inventors now file half as many international energy patent applications as their Chinese counterparts.⁶ The speed and quality with which the U.S. moves technologies from laboratory to market will shape whether American firms remain at the forefront of the industries that define the coming decades.

DOE sits at the center of this challenge. It funds the early-stage, high-risk research and development that no private actor would undertake alone. DOE also maintains national laboratory infrastructure and technical expertise that have no private-sector substitute. Deploying funds sounds simple in the abstract, but DOE must work through dozens of program offices, each with its own priorities and each nested within higher level offices and directorates.

DOE's value to the innovation ecosystem depends on the quality and diversity of the companies that take

innovations to market and drive their deployment. If the front door is difficult for these companies to find or burdensome to walk through, the applicant pool and DOE's ability to fulfill its mission narrow.

The costs of these limitations are largely invisible. DOE has no way to track the companies that considered applying but chose not to, or the technologies that stalled because their developers could not navigate federal processes. Under the current system, this kind of tracking is impractical and extremely burdensome for DOE and the companies that might consider DOE funding. These losses accrue silently: to DOE in weaker applicant pools, to the U.S. in slower commercialization, and to the companies in forgone partnership with the nation's preeminent research enterprise.

A more accessible front door does not mean a less selective one. Better-informed applicants submit stronger proposals. Companies that understand DOE's mission, constraints, and processes self-select more accurately, reducing the volume of misaligned applications and raising the quality of the rest. The recommendations in this paper are designed to make DOE more reachable without making it less rigorous.

¹ BloombergNEF, Global Energy Transition Investment Trends 2025 (2025). Global clean energy investment reached \$2.3 trillion in 2025, up 8 percent from 2024.

² International Energy Agency, World Energy Investment 2025 (Paris: IEA, 2025). <https://www.iea.org/reports/world-energy-investment-2025>

³ Government of Japan, Green Transformation (GX) Basic Policy (2023). Targets approximately JPY 150 trillion (\$1 trillion) in combined public-private clean energy investment over ten years, supported by JPY 20 trillion in GX Transition Bonds.

⁴ International Energy Agency, The State of Energy Innovation 2026 (Paris: IEA, 2026). Documented more than 80 new energy innovation policies across 32 countries and jurisdictions introduced in 2025.

⁵ David M. Hart and Colin Cunliff, Global Energy Innovation Index, Council on Foreign Relations, November 2025, <https://www.cfr.org/reports/global-energy-innovation-index>. The index ranks 39 nations across 16 indicators covering knowledge creation, market and enterprise formation, and policy support.

⁶ International Energy Agency, Tracking Clean Energy Innovation 2025 (Paris: IEA, 2025). <https://www.iea.org/reports/tracking-clean-energy-innovation-2025>

3.2 Background: DOE Mission and Constraints

DOE's mission is anchored in national priorities: energy security, scientific leadership, environmental stewardship, and nuclear security. Congress defines DOE's programs and priorities through authorizing legislation and funds them through annual appropriations. Within energy innovation, DOE advances those priorities by supporting research, development, demonstration, and deployment (RDD&D), carried out by national laboratories, universities, and private-sector partners best positioned to do the work.

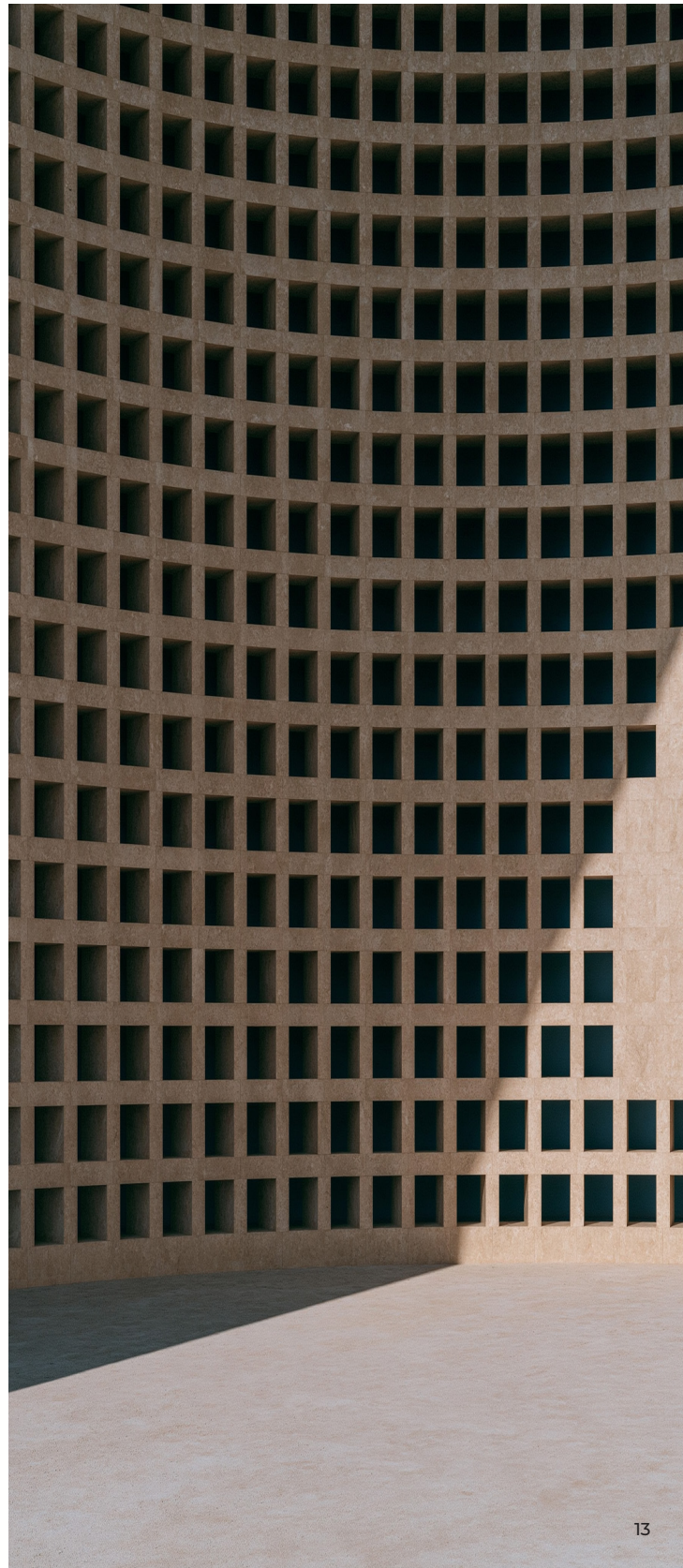
Much of what DOE does has no private-sector substitute. This includes but is not limited to:

- National laboratory infrastructure,
- Multi-year energy RDD&D programs,
- High-risk work with no near-term commercial payoff,
- Development of technology standards, and
- The technical expertise to inform government and private-sector decision-making.

DOE's value to the energy innovation ecosystem depends on the quality of the companies and researchers who access those capabilities. DOE's front door should therefore be judged not only by what DOE funds but by the quality of the private investment decisions it enables downstream.

DOE funding choices are persistently misunderstood. A company with an impressive energy technology and a strong team may not receive DOE funding for reasons unrelated to the quality of the idea: misalignment with congressional or administration priorities, office portfolios (which attempt to balance investments across technical and other factors), or a technology deemed too early-stage or mature for the available program. Making DOE funding more accessible means ensuring companies whose work aligns with DOE's mission can find, understand, and apply for the right opportunities with minimal barriers. Just as important is ensuring companies whose work does not align with DOE do not spend valuable time and resources applying for funding they are unlikely to receive.

This Blueprint identifies the constraints that shape how DOE operates within this mission (budget and appropriations, staffing and capacity, legal interpretations, communication, and structural factors) and explains how those constraints produce many of the barriers addressed in this paper.



Budget and Appropriations. Several layers of external direction determine DOE's investments:

- **Congressional specificity.** Appropriations language directs funding to specific technology areas or programs. Where Congress decides to house different efforts (in which office, under which account) shapes what gets funded and by whom.
- **Administration priorities.** Each administration outlines its priorities and launches new programs aligned with those priorities.
- **Fiscal year pressure.** The obligation to spend within set timelines compresses the time available to design thoughtful solicitations, conduct outreach, and allow applicants adequate time to respond.

The budget process for an office is discussed in more detail in Appendix 2.

Staffing and Capacity. DOE's mission is broad and evolves as national priorities change. As the nation's needs grow and evolve, federal staff often must adjust their portfolios to support administration ambitions. This shapes the applicant experience in several ways:

- **Federal system overhead.** Procurement rules, hiring timelines, administration transitions, and inter- and intra-agency coordination slow decision-making and federal awards. This overhead also changes how quickly offices can stand up new programs or respond to emerging needs. This is further complicated when some of that overhead is self-imposed, stemming not from legal requirements but from rigid or risk-averse interpretation of rules, statute, or historic norms.
- **Understaffing and competing demands.** DOE program managers juggle existing awards, solicitation design, merit reviews, stakeholder engagement, and Congressional inquiries simultaneously. Between FY2015 and FY2024, DOE's annual spending grew 74 percent while its federal civilian workforce grew just 22 percent, a gap that widened further by the \$62 billion in new funding from the Infrastructure Investment and Jobs Act. When staffing capacity is significantly constrained, applicant-facing activities (outreach, plain-language guidance, communication, process improvement) are the first to be deprioritized.



Legal Interpretations and Information Sharing. DOE staff are frequently instructed by DOE's General Counsel or financial contracting staff that they cannot share timeline information, communicate with applicants during review periods, publish application statistics, and soft-launch prizes, among other restrictions. However, none of these limitations have a statutory basis. Over time, these interpretations harden into institutional norms and culture that constrain how DOE interacts with its applicants and the general public.

- **Conservative defaults without statutory basis.** Many restrictions on what DOE can share, or when it can communicate, are rooted in risk aversion rather than in statute or regulation. Federal lawyers and financial contracting staff have little upside and significant downside legal exposure if their guidance leads to a negative outcome, even if unintended, so conservative decision making is the rational default.
- **Quiet periods and communication restrictions.** Quiet periods, during which federal staff cannot communicate directly with applicants, limit when and how DOE can engage with the applicants it hopes to attract. Once a funding program has been announced, DOE generally stops engaging with individual external parties about it. The rationale is fairness: responding to one applicant's outreach could give that applicant an advantage over others who did not reach out. DOE therefore answers questions only in public FAQ documents, so every applicant benefits from the response.

Some restrictions serve legitimate purposes. FAR 15.306, for example, restricts exchanges with potential applicants during *procurement* and source selection evaluations.⁷ But DOE's *financial assistance* programs (grants and cooperative agreements) are governed by 2 CFR 200 and 2 CFR 910, which impose no comparable blackout requirement⁸. The extension of procurement-style quiet periods to financial assistance programs goes beyond what the governing regulations require and creates windows where DOE goes effectively silent to the communities it serves.

- **Hatch Act and election-cycle caution.** The Hatch Act restricts federal employees from partisan political activities⁹. While it does not prohibit program-related outreach or funding solicitation announcements, DOE guidance and Office of General Counsel interpretation may extend caution beyond what the statute requires. This may include limiting outreach and communication during election cycles. As a result, DOE can go silent to the communities it serves at times when its engagement would be perfectly lawful and help to strengthen the applicant pool.

Quiet Period Shortcomings: Companies will reach out to DOE staff or the solicitation email address with questions about the solicitation and its terms. Some ask whether their technology is a fit, which DOE reasonably declines to answer because it could not do so for every applicant. But other questions, about eligibility or potential award terms, can be gating factors for a company and are hard to address in a general FAQ. This can lead to questions going unanswered and an applicant deciding that continuing with the application is not worth their time.

⁷ Federal Acquisition Regulation, 48 CFR 15.306, Exchanges with Offerors After Receipt of Proposals.

⁸ 2 CFR 200 (Uniform Administrative Requirements for Federal Awards) and 2 CFR 910 (DOE Financial Assistance Regulation) govern DOE grants and cooperative agreements. Neither contains a quiet-period or blackout provision comparable to FAR 15.306.

⁹ 5 U.S.C. 7321–7326. The Hatch Act restricts federal employees from engaging in partisan political activity but does not restrict program-related outreach or solicitation announcements.

Communication and Outreach. Even when DOE is legally permitted to conduct external outreach, institutional structures limit how effectively it reaches potential applicants:

- **Limited storytelling.** Much of the private sector does not know what DOE does, what it funds, or how it could support their technology. DOE's public profile focuses on issuing funding opportunity announcements and announcing awards rather than showcasing the long-term impact of its work. As a result, entities that could benefit from DOE funding do not see themselves as beneficiaries.
- **Budget tension.** There is a philosophical misalignment within DOE about spending money on communication versus RDD&D. In an agency built around science and engineering, outreach and storytelling are often viewed as secondary to the core technical mission, even though effective communication is what connects that mission to the companies that can help advance it.
- **Public Affairs alignment.** DOE's Public Affairs (PA) office serves the Secretary's priorities, not DOE program-level engagement. Program offices (e.g., Office of Nuclear Energy) that want to reach potential applicants largely do so on their own, with whatever resources and staff capacity they can spare from their primary responsibilities.

Structural and Systemic. Some constraints are built into how DOE is organized rather than how it is staffed or funded:

- **Balkanized funding systems.** DOE operates multiple disconnected systems across the department for managing solicitations, applications, and awards. There is no single infrastructure that connects these systems or presents them coherently to the outside world. There are dozens of independent web pages across energy.gov where grants and cooperative agreements are posted, in addition to the mandatory listings on Grants.gov (2 CFR 200.204)¹⁰. There are even more once prizes, lab calls, and programming run by DOE funded intermediaries are included. The result is confusing, intimidating, and at times deterring for energy startups and companies.
- **Underutilized funding tools.** DOE has the authority to use a range of funding mechanisms within their toolkit, but in practice, defaults to using a narrow subset (See Appendix 1). The full range of tools are not consistently leveraged or even understood by all DOE funding offices, and there is no training offered. This limits DOE's ability to match the right mechanism to the right applicant at the right stage of development within the commercialization pathway.

The front door to DOE funding is not entirely closed. Across DOE's history, individual offices have, of their own accord, developed effective practices for outreach, communication, and applicant engagement that others can model (several are highlighted in the sections that follow). The goal is to make a functioning system work better and standardize best practices.

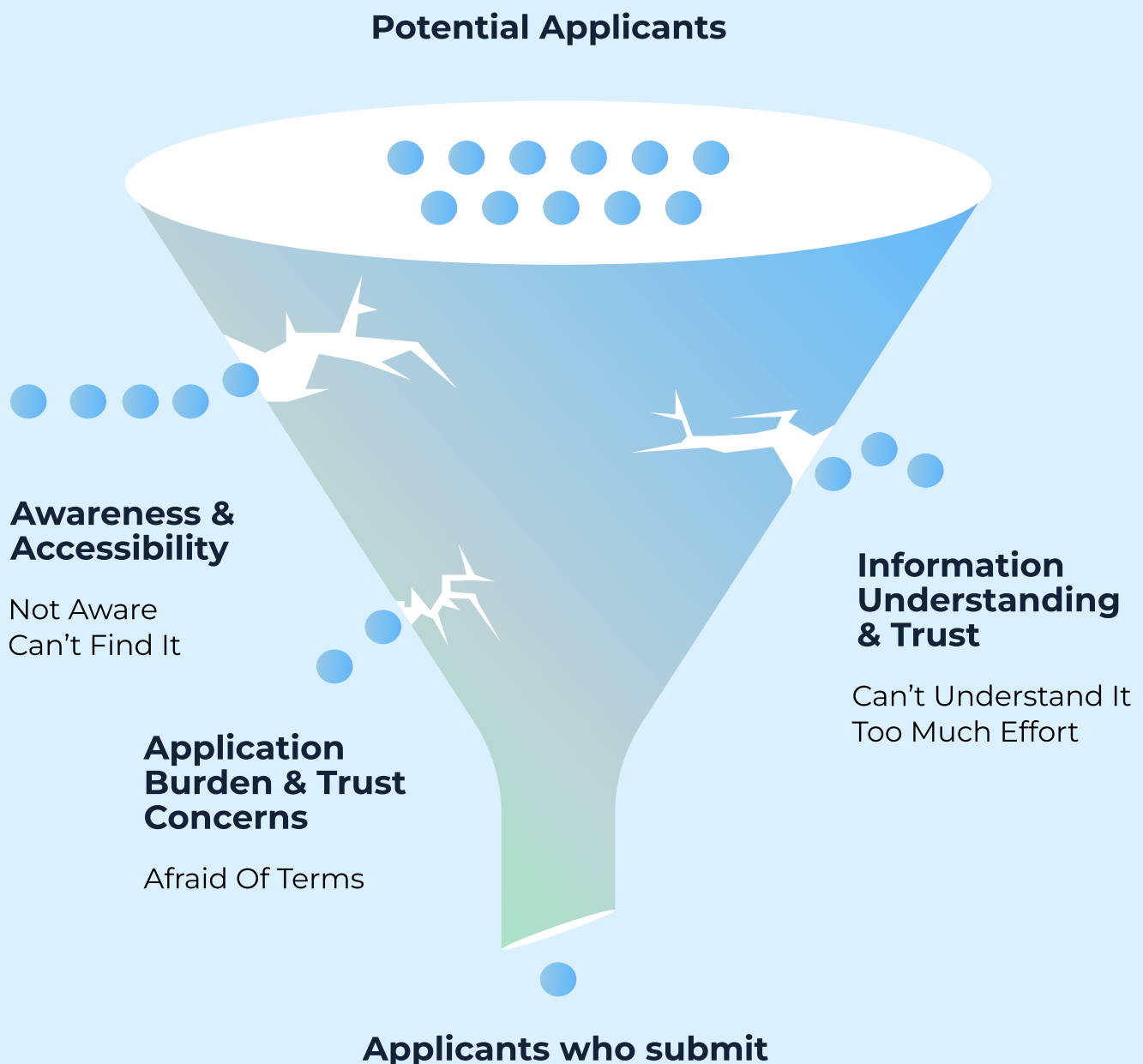
¹⁰ 2 CFR 200.204 requires federal agencies to announce funding opportunities on Grants.gov.

The Applicant Journey

04

The Applicant Journey

Before turning to specific barriers and the recommendations that address them, it is essential to follow the path of a prospective applicant. Much of what determines whether a strong technology or solution ever reaches DOE happens before a proposal is written. The journey runs through three stages — discovery, understanding, and the decision to take on the application burden. At each stage, capable startups and companies fall away for reasons that have little to do with the quality of their work. Because these applicants never enter the formal pipeline, DOE has limited visibility into who it is losing, or why.



Stage 1. Discovery: Can the applicant find the opportunity? The journey begins with awareness, which is unevenly distributed. A startup with a relevant technology has no single place to look. DOE's competitive funding is spread across multiple offices and websites, described in unexplained acronyms, with no forward-looking view of which solicitations are coming next (beyond Notices of Intent, which tend to be light on actionable information and issued too late to allow for much planning). Compounding the problem, expired funding programs are not always removed from DOE websites. Applicants already connected to the DOE ecosystem, through an accelerator, a national-laboratory relationship, prior federal experience, or simply knowing "the right person," often learn about DOE opportunities through informal channels. A first-time applicant without those relationships has neither a digital path (no central portal, no published schedule of upcoming opportunities) nor a human one (no intermediary or navigator to point them toward a fit). The result is many qualified startups and companies never discover an opportunity suited to their work, and those that do often find it too late to prepare a competitive submission.

Stage 2. Additionally, applicants often struggle to decipher whether their technology aligns with the opportunity's objectives and desired technology readiness level. Finding a solicitation is only the first hurdle. A company that locates a potentially relevant funding program must then understand both what is being asked and what it would be committed to. Two kinds of gaps appear here. The first is comprehension: long documents and unfamiliar terms of art, such as cost share (the share of project costs an applicant must cover itself), march-in rights (the government's ability, in narrow circumstances, to require licensing of a funded invention), and foreign-entity disclosure requirements may create comprehension barriers.

Additionally, the difficulty of deciphering whether a company's technology aligns with the objective and desired technology readiness level of the opportunity. Furthermore, confidence can be a barrier even when comprehension is not. Many applicants turn to outside counsel to assess risk, and counsel frequently flag terms that cannot be evaluated without more information than the solicitation provides. For a company without dedicated federal grants counsel, there may be unanswered questions and a choice between walking away or spending the limited application window trying to understand the commitment rather than making the case for the technology.

Stage 3. The Decision to Apply: Is the opportunity worth the cost of pursuing it and can they manage a federal award? An applicant who has found a solicitation and understood its terms still faces a final calculation: whether the expected value justifies the cost of applying, a cost that is both substantial and front-loaded. Preparing a full proposal can divert a month or more of engineering time from product development, often with no lightweight first step (such as a concept paper) before fully committing. For example, a first-time Small Business Innovation Research (SBIR) applicant faces roughly 50 pages of material across fourteen components and an estimated 150 hours of preparation for a \$200,000 award.¹¹ The calculation gets harder when a solicitation is scoped to a specific technical pathway that an applicant's technology does not follow, even when that technology could reach the same objective.

¹¹ National Academies of Sciences, Engineering, and Medicine. An Assessment of ARPA-E (National Academies Press, 2017) <https://www.nationalacademies.org/projects/PGA-STEP-14-02/publication/24778>

Compliance requirements that do not matter until after an award is made are frequently required up front in the application process, adding cost before there is any benefit. Because there is no clear award schedule, an applicant who might prefer to wait for a better-fitting opportunity usually cannot see one coming, so they apply anyway, spending engineering time, outside counsel, and leadership attention on a long-odds bid.

For many startups and companies, this is the stage where the costs of applying outweigh the known value, and a capable potential applicant becomes one DOE never hears from. Additionally, barriers exist – both perceived and real – to the management of federal funds, including the process of reviewing the funding requirements.

1 Discovery

Finding opportunities in a complex landscape.

2 Understanding

Making sense of the opportunity and deciding if it's the right fit

3 Burden

Navigating a demanding process with high friction



Taken together, these three stages of an applicant's journey describe a narrowing of company engagement at every step, driven by how hard the system is to find, understand, and act on rather than by the merits of the applicants. The Blueprint examines each stage

in turn: awareness and accessibility (Section 6), information, understanding, and trust (Section 7), and application burden (Section 8), along with the changes designed to widen the opening at each one.

Blueprint to Widen DOE's Front Door

05

Blueprint to Widen DOE's Front Door

Five recommendations, each reinforcing the others, would open DOE's front door wider. All are within DOE's existing administrative authority. They are grounded in DOE's general contracting and grant-making powers (42 U.S.C. 7256)¹², its financial assistance regulations (2 CFR 910 and 10 CFR 600)¹³, and specific authorities such as prize competitions (EPACT 2005, 42 U.S.C. 16396)¹⁴ and other transactions. Some depend on leadership direction to overcome internal resistance; others could be adopted by individual offices immediately.

01	Digital Front Door.	A single online entry point to DOE funding that pairs a searchable portal with advance notice of upcoming solicitations. 1.1: Single Funding Portal. A single, searchable location listing all current and planned DOE competitive funding opportunities across all mechanism types. A unified portal democratizes access to information that incumbents currently get through relationships. 1.2: Future Solicitation Schedule. A forward-looking schedule of planned solicitations published 6–12 months out. Advance notice levels the playing field and allows applicants to plan for their best funding program. DOE benefits too: when applicants self-select into the best-fitting programs, the result is a stronger, better-targeted applicant pool.
02	Simplified, Standardized, and Transparent Application Architecture.	Streamline application requirements to what is essential for making funding decisions. Publish applicable terms and conditions alongside each solicitation so applicants can review contractual commitments before applying and provide plain-language explainers to ensure terms are accessible to companies without dedicated federal grants counsel.
03	Funded Intermediaries for Outreach and Application Support.	Systematically fund entrepreneurial support organizations that can identify potential applicants outside DOE's existing network, make them aware of opportunities, and help them navigate the process.
04	Staged Application Process.	Require an initial screen (e.g., a concept paper or similar low-effort submission) before asking companies to invest in a full application. A brief first stage lets applicants invest days, not months, to learn whether their idea has a chance or is an appropriate fit.
05	Objective-Based Solicitation Tracks.	Dedicate a portion of competitive funding to solicitations that define measurable outcomes without prescribing the technology pathway, letting DOE discover solutions it may not have prescribed.

¹² 42 U.S.C. 7256, DOE general authority to enter into and perform contracts, leases, cooperative agreements, or other transactions.

¹³ 2 CFR 910 (DOE Financial Assistance Regulation) and 10 CFR 600 (DOE Assistance Regulations).

¹⁴ Energy Policy Act of 2005 (P.L. 109–58), Section 1008, codified at 42 U.S.C. 16396, authorizing DOE prize competitions.

These recommendations reinforce each other. A portal with a forward schedule makes intermediaries more effective. Concept papers make objective-based topics manageable by filtering volume before full application review. Standardized terms and conditions shared with the solicitation reduce the understanding barrier that deters applicants from even starting. The full set is more powerful than any single fix.

How Recommendations Address Each Barrier



A wider front door to DOE support does not have to mean a heavier workload for DOE staff. Better-informed, better-matched applicants mean fewer weak applications to review, stronger applicant pools, and less time spent on awards that collapse during negotiation. A staged application process reduces review volume before it becomes unmanageable.

Recognizing that DOE is not structured to adopt these recommendations easily, the Operational Design (Section 9) includes a suggested implementation pathway for each: who initiates it, what authority it requires, and what a realistic first step looks like. Where possible, the changes build on, or advocate for maintaining, processes DOE already runs.

The following three sections identify the key barriers and how these five recommendations map to address them.

Barrier 1: Awareness & Accessibility

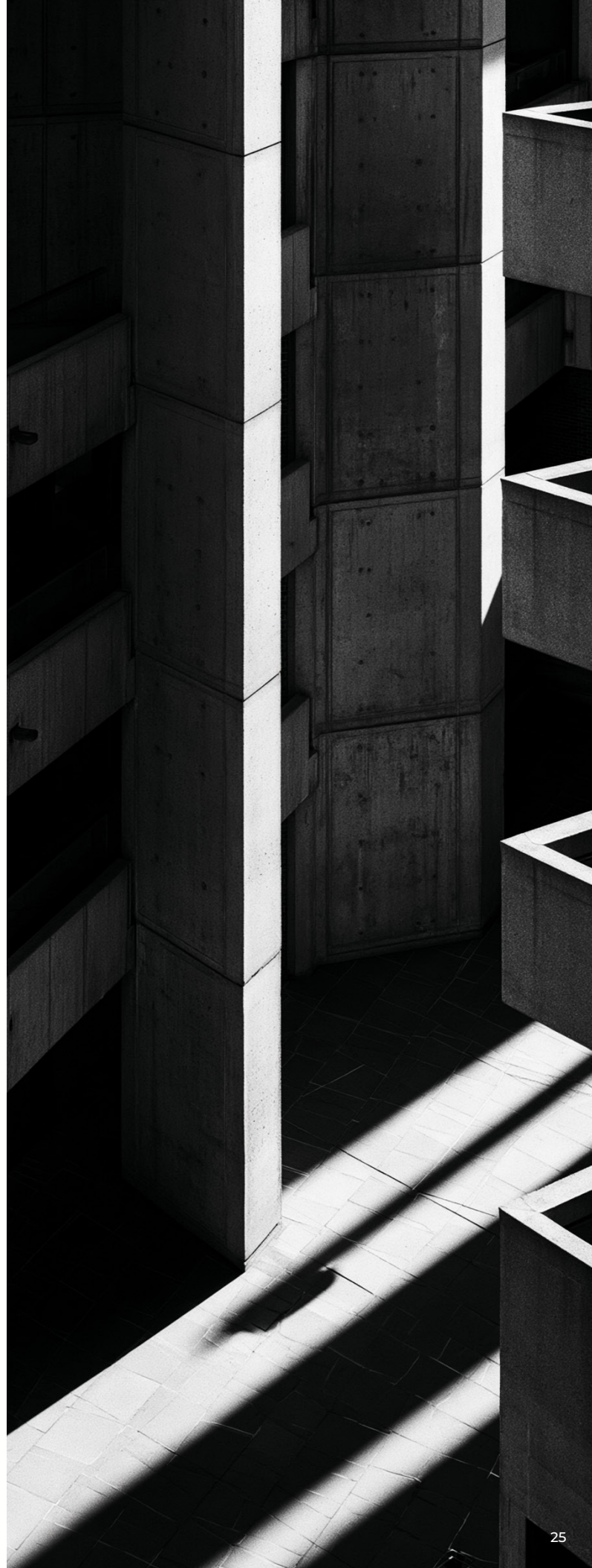
06

6.1 Funding Award Labyrinth

A company seeking DOE funding today faces two related problems. First, there is no single place to find what is available. Prizes live on one site, grants on another, cooperative agreements scattered across several more, with no simple way to search across them. Second, DOE has a deeply rooted culture of not sharing future plans. Even when offices know a solicitation is coming, that information stays internal until a formal Notice of Intent, typically issued only a couple of months beforehand. The structural constraints described in Section 3.2 reinforce this reluctance. The result is a fragmented landscape with no centralized location, no forward schedule, and no systematic outreach beyond existing networks. Companies are left reacting to, or completely missing, opportunities as they appear rather than planning ahead, or resort to “reading tea leaves” to infer what DOE plans to do.

These are the conditions that produce the pattern described in Section 3.1: startups and companies that never applied because they could not find the opportunity, could not tell whether they fit, or had no connection to anyone who could help them navigate the system. The fact that startups and companies routinely hire consultants just to discover and interpret DOE solicitations is itself evidence that the system is not working as efficiently as intended.

Some DOE offices have found ways to do better within existing constraints. The former solar and water power offices maintained open-now funding pages. The Office of Clean Energy Demonstrations (OCED) built communication and storytelling into its investment approach and published application statistics. These are isolated examples rather than common practice, and none solve the whole problem. They do demonstrate that improvement is achievable within DOE’s current structure and could be applied department wide.



6.2 Digital Front Door

DOE should create a single, searchable portal. listing all current competitive funding opportunities. Each listing should include the technology area, a plain-language description of the award’s goal, the approximate funding range, the funding mechanism type, searchable keywords, and current status. Users should be able to filter or tag areas of interest and receive alerts when opportunities move from planned to open.

The technical barrier to building this portal is low. DOE has taken initial steps to consolidate its funding announcement pages, but the consolidated site

does not yet cover prizes, PIAs, lab calls, or technical assistance opportunities, and will not without deliberate expansion. At minimum, DOE should structure its data so third-party tools can aggregate it.

Funding selection statistics. In addition, on the same site, DOE should publish application and selection statistics for every completed competitive solicitation (how many applied, how many won). Offices have been told this is prohibited, yet OCED published such statistics without issue. Extending the practice department-wide would give potential applicants one more data point for deciding where to invest effort.

OCED is one of the few DOE offices to publish solicitation statistics at each stage of its application process. The table below shows published data for programs where OCED used concept papers as a first-stage screen — illustrating both the demand signal and how concept papers manage review volume by narrowing the field before full applications are requested.

OCED Solicitation Statistics

Program	Concept Papers Received	Encouraged to Apply	Projects Selected
Industrial Demonstrations	411	130	33
Energy Improvements in Rural or Remote Areas	365	78	17
Regional Clean Hydrogen Hubs	79	33	7
Carbon Capture Large-Scale Pilots	30	19	4

Signal Upcoming Awards.

DOE should publish a schedule of planned solicitations at least six months in advance to help startups and companies prepare. Better-targeted companies reduce the volume of poorly matched applications DOE has to process. When companies can see the full landscape, they can choose the programs where their probability of success is highest or that offer the support they actually need. This is a workload management tool for DOE and applicants as much as an access tool.

The reluctance to share forward-looking information is the result of real constraints within DOE. Continuing resolutions and late budgets from Congress force constant scenario planning, as DOE offices are not certain of budgets for funding opportunities. Fiscal year pressure to obligate funds before the clock runs out compounds the problem. However, even with these

constraints, the common practice within DOE is to have a clear plan for the programs that will be launched 6–12 months in advance factoring in different funding levels. DOE already plans this way as common practice; the open question is whether it will share those plans publicly so companies can plan too.

DOE offices face many competing claims on a limited budget, so only a fraction of an office’s appropriation is ever available for new, openly competed awards. The figure below shows how a representative, theoretical \$200 million office budget is winnowed down.

How a \$200M Office Budget Winnows to New-Award Funding

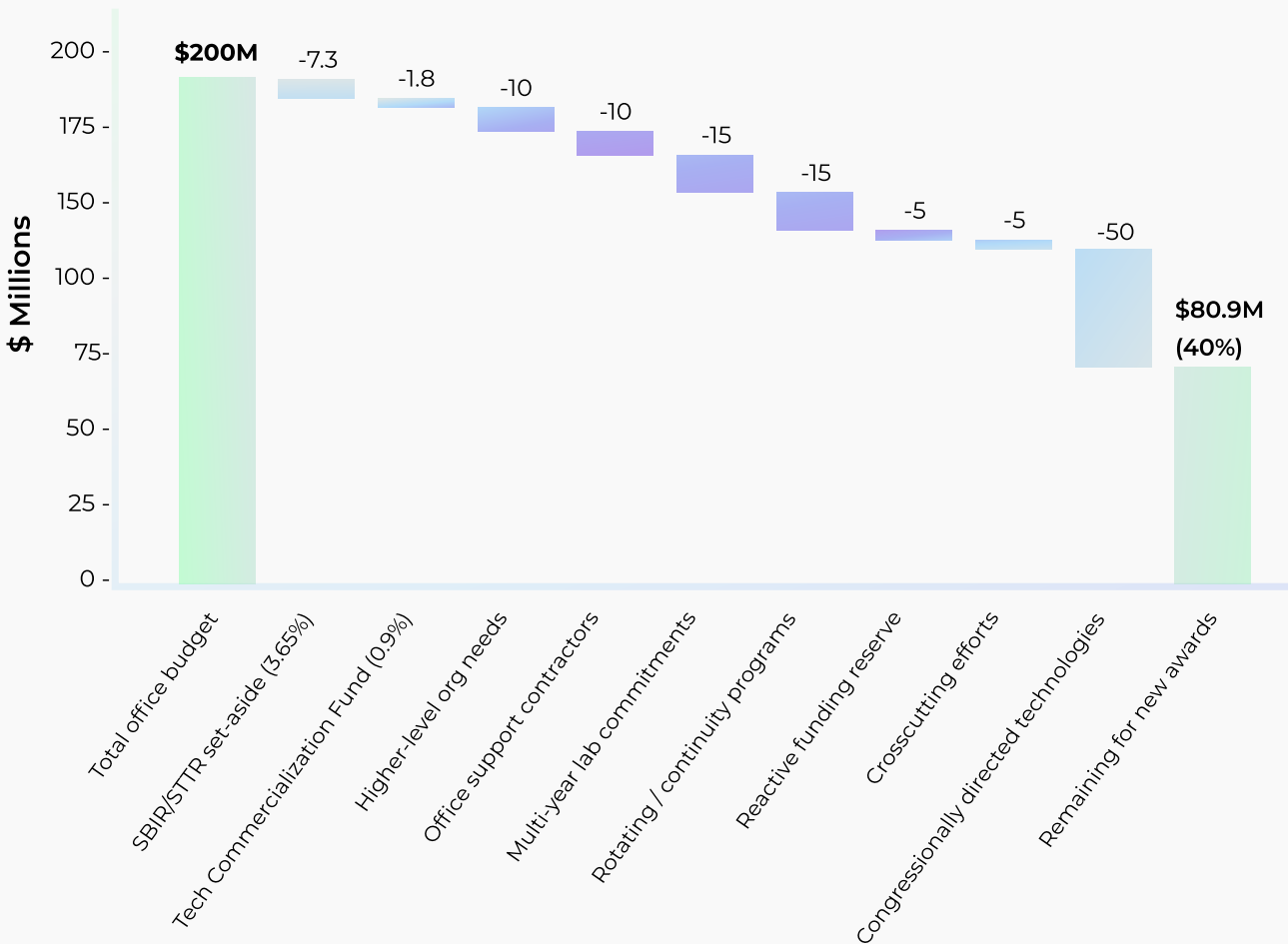


Figure. How a representative \$200M office budget winnows to discretionary new-award funding. See the Appendix 2: How an Office Budget Winnows to New-Award Funding for a detailed walk-through of each claim on the budget.

DOE should be able to share the names and descriptions of planned funding areas with caveats that the details may change based on available funding or other factors (which DOE already states in all funding solicitation documents). DOE tends to treat a public change of course as a planning failure, when it more often shows that DOE can respond nimbly to new information. More broadly, DOE should revisit its information-sharing constraints from first principles. A back-to-basics review would distinguish what is legally required from what is institutional habit.



6.3 Human Front Door

A common and accessible portal solves the discovery problem for companies that already know to look for it. But many potential applicants are not searching for DOE funding at all: they do not know it exists, cannot tell whether it fits their work, or have limited ways to ask questions. For these companies, the front door is a person: a trusted contact from an incubator, accelerator, or regional energy entity, or a colleague who has been through the process and can walk through why a DOE funding opportunity may be right for them. Without a trusted contact to explain how the funding works and to vouch for DOE as a partner, a company is far less likely to get comfortable pursuing funding. Clear outreach and consistent delivery on project funds are necessary to bridge this gap.

DOE's ability to do this outreach itself is structurally limited by the constraints described in Section 3.2, which means its applicant pool is shaped more by

who is already aware and willing to apply than by who has the best ideas. Individual offices have found ways around this (OCED built communication into its investment approach, the former solar office funded “power connectors” to reach new applicants¹⁵) but these efforts depend on extraordinary individual initiative rather than institutional design.

The most effective way to reach companies outside DOE's existing network is through organizations that already have their trust: accelerators, incubators, industry associations, regional innovation hubs, and university technology transfer offices, for example. These intermediaries are the human infrastructure that keeps DOE's front door open at scale. The implementation details for building this access are addressed in Section 9.4.

¹⁵ American-Made Network Power Connectors:
<https://americanmadeprogram.org/network/power-connectors>

Barrier 2: Information, Understanding, and Trust

07

Barrier 2: Information, Understanding, and Trust

Uncertainty, real or perceived, about what a DOE funding program requires to apply and what terms apply if selected can be enough to dissuade a qualified company from applying. When the terms of engagement are unclear, the rational response is often to walk away rather than invest months of effort into an unknown commitment.

This matters for all DOE funding programs and is complicated by the fact that DOE funds projects through several different mechanisms (see Appendix

1). When potential applicants cannot understand what they are being asked to work on or cannot assess whether the commitment is worth the risk, DOE loses applicants it never sees (Section 3.1). The companies that do apply skew toward those with prior federal experience or the resources to hire consultants who can interpret the system and apply on their behalf. The problem has two dimensions: comprehension (can an applicant understand what DOE is asking?) and confidence (can an applicant assess whether the risk of committing resources to apply is worth taking?).

7.1 Fragmented Information

Some of the building blocks for a more transparent system already exist and are in use. Cost-share requirements, though they still require research beyond the solicitation document, are tiered by R&D stage under EPACT 2005 Section 988 (42 U.S.C. 16352)¹⁶ and implemented through 2 CFR 910.130¹⁷ — with lower percentages for earlier-stage research (typically 20 percent or less) and higher requirements for demonstration-scale projects (up to 50 percent, though applicants can contribute more than this). These tiers are stated in funding solicitations.

Solicitations contain a wealth of information on eligibility criteria, teaming, review criteria, reporting requirements, how cost-share is calculated, limitations on the uses of government funds, and more. Thorough as this content is, other strings attached to the funding and the application process remain thinly explained and widely misunderstood. A 2021 study in the Proceedings of the National Academy of Sciences found the gap between who is eligible for government

programs and who actually applies is driven less by ability than by willingness — and that small changes in framing increased interest in claiming benefits by 20 to 128 percent.¹⁸

Terms and conditions are largely standardized across the department but remain unexplained and unfamiliar to many applicants until after they are selected for award negotiations. The application process itself is opaque: no standard published timeline from submission to award, no consistent feedback policy for unsuccessful applicants, and limited information about what happens after selection. The constraints in Section 3.2 help explain why. Applicants who lack the resources to decode the system on their own are disadvantaged.

This yields another instance of the invisible loss described in Section 3.1: potential applicants who opt out based on incomplete information or perceived risk.

¹⁶ Energy Policy Act of 2005, Section 988, codified at 42 U.S.C. 16352, establishing cost-sharing requirements for DOE research and development activities.

¹⁷ 2 CFR 910.130 implements DOE cost-sharing requirements for financial assistance awards.

¹⁸ “Psychological Ownership Interventions Increase Interest in Claiming Government Benefits,” Proceedings of the National Academy of Sciences 118, no. 44 (2021), <https://doi.org/10.1073/pnas.2106357118>.

7.2 Clear & Standardized Solicitations

DOE's funding solicitations serve two functions:

(1) communicating intent and requirements to applicants and (2) managing legal and institutional risk. Because solicitations are trying to serve both purposes in a single document, they serve neither well. Every solicitation inherits language from previous solicitations, reviewed and shaped by legal counsel and financial contracting staff whose primary responsibility is reducing DOE's liability. The result is what might be called procedural plaque: each round of legal review adds protective language while rarely removing any, and each template carries forward provisions from prior solicitations regardless of whether they apply

to the current opportunity. This can be compounded when executive orders and other directives layer further requirements on applicants, such as community benefits or domestic manufacturing plans.

Standardized templates reduce the number of legal reviews needed per solicitation, and boilerplate that has survived prior audits is safer than new language that has not. This is rational for DOE's operations but creates a growing gap between what solicitations contain and what applicants can parse.

As described in Section 3.2, many of these defaults lack a statutory basis.

Why Every Notice of Funding Opportunity (NOFO) Looks the Same — Plaque Buildup. How standardized template language streamlines DOE internal approval but creates 150–page FOAs where applicants can't distinguish relevant from irrelevant.

Cost-share illustrates the problem. As described, DOE's cost-share requirements are tiered by technology readiness and award type with lower percentages for earlier-stage research, higher for demonstration. This is a reasonable structure, and it is stated in individual solicitations. But it is not presented as a framework. A first-time applicant reading a 50 percent cost-share requirement has no way to know from the solicitation alone whether that is standard across DOE, what the range typically looks like, or what cost-share means in practice for their cash flow and accounting. The requirement appears as a fixed demand rather than one parameter within a broader system. The same is true of other terms (march-in rights for intellectual property, foreign entity disclosure, reporting obligations) that serve legitimate purposes but are never explained in context.

Plain-language front page. Every solicitation should include a short summary, no more than two pages, that explains in accessible terms what DOE is funding, what the applicant is committing to, what cost share means for this opportunity, and what the process and timeline look like. This is not a replacement for the full solicitation. It is a go/no-go tool that lets a company decide whether to invest further time and resources before reading a 150–page document.

Cost-share explained as a framework. DOE should present cost-share requirements in context on its website: why DOE uses cost share, what the typical amount is by stage and mechanism type, and what it means in practice for a company's finances.

Publishing a cost share calculator or worked example would further help applicants ensure compliance. This information exists internally; making it available externally allows applicants to assess the financial commitment before investing time in an application.

Terms and conditions published with each solicitation. Currently, applicants often do not see the full contractual terms until after selection, during award negotiations, by which point both sides have invested significant time and resources. DOE should publish the applicable terms and conditions alongside every funding opportunity, accompanied by plain-language guides. The implementation path for this change is detailed in Section 9.3.

7.3 Confidence in the Solicitation Process

Clear, standardized solicitations are vital, but this recommendation is not sufficient on its own. A company may understand a DOE funding opportunity and still decide not to apply because it cannot assess whether the commitment is worth the risk, real or perceived. This shows up most clearly in three areas: the application process itself, the legal terms attached to awards, and the handling of proprietary information, each of which creates uncertainty that a company may decide it cannot afford. Too often DOE includes what is legally needed in a solicitation without taking the extra step to assess whether it is clear.

Process transparency.

For most DOE funding programs, the process from application to award is opaque. There is no published timeline for how long review or negotiation takes, no consistent policy on whether unsuccessful applicants receive feedback, and little information about what happens between selection and the start of work. For a startup managing cash flow and investor expectations, this is a material factor in the go/no-go decision. A typical Series A company burns a median of \$350,000 per month¹⁹; on that basis, a 10-month wait from application to award represents roughly \$3.5 million in operational costs incurred before any DOE funding arrives.

DOE should communicate upfront what the process looks like for each solicitation. This should include the expected timeline from submission to award, what the review process involves, whether and how feedback will be provided, and what the post-selection negotiation process entails. Some of this is included in solicitations at a high-level, but not in enough detail to be actionable. Providing additional detail gives applicants the confidence to invest their time and plan their resources accordingly.

Intellectual property and march-in rights.

Intellectual property is consistently raised as a top concern by both applicants and their investors. Under the Bayh-Dole Act (35 U.S.C. 200–212), companies that develop inventions with federal funding retain ownership of the resulting IP, but the government retains march-in rights under 35 U.S.C. 203. This is the authority to require the patent holder to license the invention under certain circumstances. In practice, no federal agency has ever exercised march-in rights in over four decades, establishing a de facto standard of non-use. But for companies whose valuation rests on their IP portfolio, the risk is not that march-in is likely but that they cannot confidently tell a board or investor that it will not happen.

DOE can address this by explaining march-in rights in plain language in every solicitation:

what the authority is, and under what circumstances it could be invoked. A brief, factual explanation would reduce anxiety far more than the current approach of including the statutory language without context.

Freedom of Information Act (FOIA).

Companies applying for DOE funding submit detailed technical, financial, and business information. For many, particularly those new to federal funding, a persistent concern is whether this information could be disclosed through FOIA requests. FOIA Exemption 4 protects trade secrets and confidential commercial information from disclosure, and the Supreme Court strengthened this protection in *Food Marketing Institute v. Argus Leader Media* (2019). DOE routinely applies this exemption and has a well-established process for handling requests involving commercial information, including notifying the submitter and working with them to identify protected content before releasing any records.

¹⁹ Carta, “Burn rate,” Carta (eShares, Inc.), 2025, <https://carta.com/learn/startups/metrics/burn-rate/>.

Information that is genuinely proprietary is protected under existing law and DOE practice. Most solicitations reference FOIA and its exemptions in legal terms without explaining what the protections mean in practice. A company reading that its submission “may be subject to FOIA” without understanding the exemption process may reasonably conclude that applying means putting proprietary information at risk.

DOE should include plain-language explanations of FOIA protections in solicitations and on the portal including what is protected, what the process looks like (if a request is filed), and the role of the applicant.

Equity stakes. Under the Trump Administration, equity consideration language has begun to appear in DOE solicitations. The Critical Materials

Accelerator included language stating that DOE “may be interested in obtaining equity interests in recipient entities.” For venture-backed companies, a government equity stake raises cap table, governance, and fiduciary concerns that are more immediate than the theoretical risk of march-in. Introducing equity language into individual solicitations without a department-wide framework creates uncertainty that deters applicants.

DOE should publish clear equity terms and policies. If DOE intends to pursue equity interests, it should do so through a transparent policy that states the terms and cites the legal authorities, rather than through ad hoc language that varies by program.



Barrier 3: Application Burden and the Peril of Narrow Topics & Tools

08

Barrier 3: Application Burden and the Peril of Narrow Topics & Tools

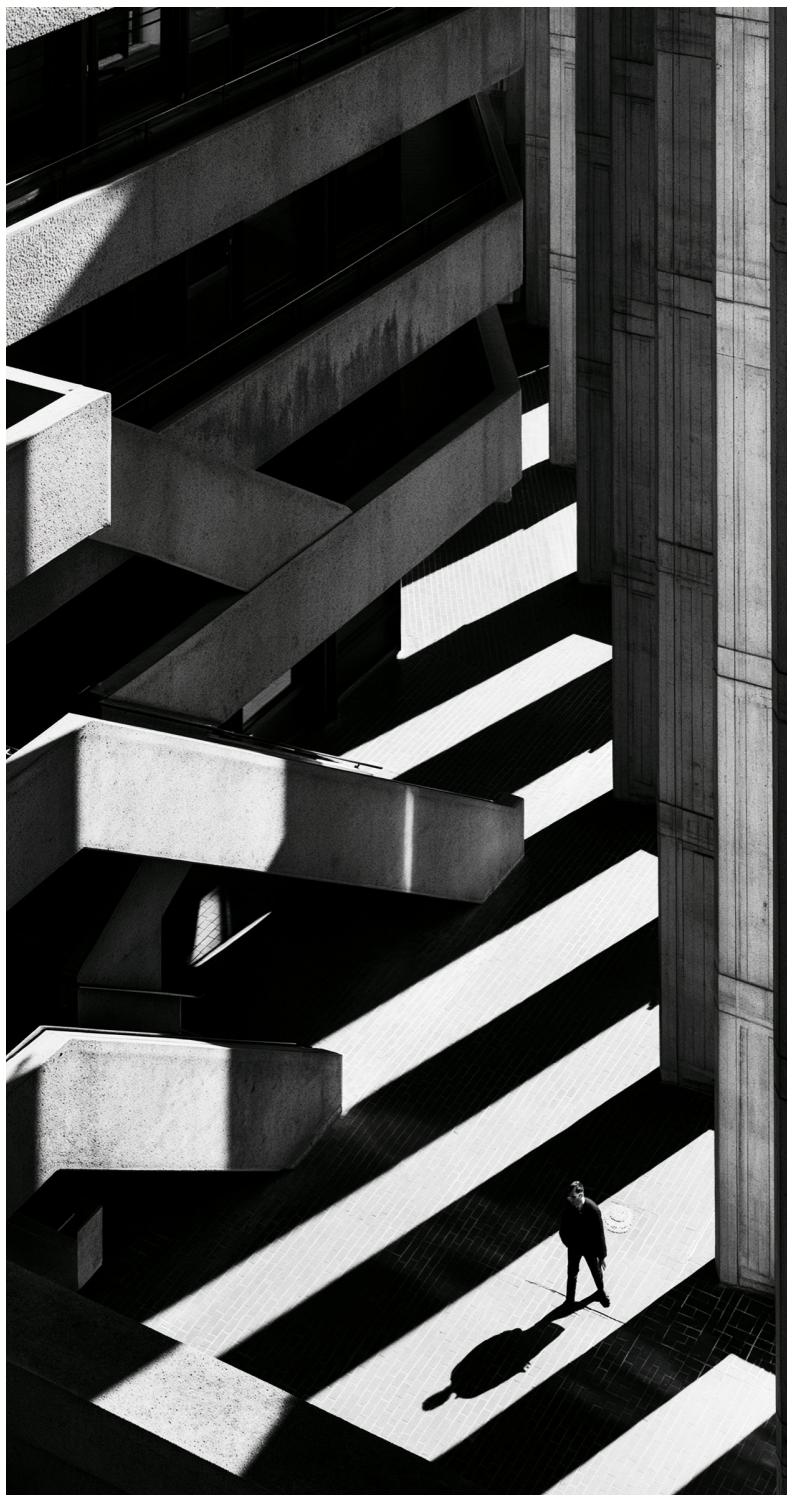
A company that has found the funding opportunity, understood what DOE is asking, and decided the commitment is worth the risk then begins work on the application. However, even a company with strong technical merit can struggle at this stage, because the application demands more time, money, and institutional knowledge than a resource-constrained organization can spare.

For a startup, writing a federal proposal means pulling engineers from product development for weeks, a significant bet on an uncertain outcome. Add the need for outside counsel to review terms, accountants to structure cost share, and the leadership attention to coordinate the effort, and the true burden can balloon beyond what is practical for a small startup. If a company wants to do this internally, that is even more bandwidth diverted away from other critical research or business tasks. When the solicitation requires a full proposal with no concept paper to test fit, the company is making that bet blind with potentially no concept of what their percent chance of winning might be. When the topic is scoped so narrowly that the company's technology does not fit despite achieving the same objective, it may never get the chance to make the bet at all.

This problem has two distinct elements:

- **Burden** – Applications that ask for more than DOE needs to make a good funding decision, at stages when collecting that information adds cost without adding value.
- **Aperture** – Solicitations scoped so narrowly that they exclude qualified innovators whose approach does not match the program manager's mental model of the solution.

Both elements narrow the applicant pool in ways that work against DOE's mission.



8.1 Existing Barriers and Half Measures

Concept papers reduce burden but are not used ubiquitously. Some DOE programs have already shown that lighter-touch approaches work to advance solicitations. Many offices like ARPA-E use concept papers effectively as a first-stage screen, allowing companies to test fit before investing in a full proposal. Concept papers were once standard in DOE solicitations, but many programs have recently dropped them, making the full proposal the first and only stage. Concept paper reviews require staff time that is already stretched thin, and some program managers view them as adding a step rather than saving one.

However, without a concept paper stage, every applicant bears the full cost of a full application regardless of fit. A program that receives 200 applications and makes 5 awards has required 195 companies to invest weeks of work for no return and to the potential detriment of the company and their resources. A concept paper, or similar early submission of interest, would have let many learn early that their approach was not competitive, saving their time and DOE's review burden, which is overall a net positive for the innovation community.

DOE does not fully maximize its range of funding mechanisms. DOE has access to a range of funding mechanisms — prizes, grants, cooperative agreements, partnership intermediary agreements, other transactions, and procurements — each designed for different levels of engagement. However, not all offices deploy these tools strategically, effectively resulting in some funding programs that are not optimized for their intended applicant pool. A startup applying for a \$500,000 award through a cooperative agreement faces the same terms-and-conditions framework as large company or consortium applying for \$50 million to do a demonstration project

with the same tool. The burden is disproportionate to the scale of the opportunity.

Unnecessary information is required through solicitations. Applications collect more than is needed to make a funding decision. Compliance requirements that will not matter until post-award are routinely required at the application stage. Each may be individually justifiable, but DOE rarely uses them all to make a funding decision. The cumulative effect is a process optimized for DOE's post-selection workflow rather than for decision quality. The staffing constraints described in Section 3.2 compound the problem — when staff are stretched thin, the path of least resistance is to reuse the prior template rather than right-size it.

Narrow topics are limiting. DOE's entry point narrows further when solicitations define topics so tightly that they prescribe the solution rather than the outcome or need. A company with a novel approach to the problem may find its technology does not fit the solicitation's framing, even though it could meet or exceed the stated objectives. This is partly driven by appropriations as Congress often funds specific technology areas, creating pressure to scope solicitations tightly. It is also a form of risk management, as narrow topics are easier to evaluate, easier to justify to Congress, and easier to manage within existing review frameworks. But the cost is that DOE's applicant pool is shaped by who fits the prescribed path rather than who can best solve the problem. The GAO's analysis of AFWERX found that 43 percent of awardees under open-topic solicitations had no prior federal contracts, compared to 14 percent under conventional narrow topics (GAO-22-105223)²⁰. The companies DOE are not reaching may be the ones with the most to offer to the clean energy transition.

²⁰ U.S. Government Accountability Office, Small Business Innovation Research: DOD's AFWERX Open Topic Process, GAO-22-105223 (2022).

AI tools are going to exacerbate review and selection challenges. AI tools are reducing the time to prepare applications but is already creating an increasing number of applications. While the use of AI in application preparation can be a perceived benefit to applicants, the volume of review in general for DOE will compound. This has the potential to lessen the opportunity for a company to get funded based on competition pool size and increases the workload for DOE. A study of 12 major research funders found a 57 percent aggregate increase in submissions between 2022 and 2025, with individual programs experiencing increases of up to 142 percent²¹. While DOE has not

published department-wide volume trends, program offices are likely already experiencing the pressure of more applications. In an environment with more reviews and less input provided to the applicant, going to full applications directly disadvantages both applicants and DOE staff. Without a gate for interim review – like concept papers – applicants will dedicate more time with less likelihood of success if only provided a full application opportunity. Likewise, DOE staff will spend an outsized amount of time reviewing the increasing volume of applicants and absent a staged process, no interim indication of the volume anticipated.

8.2 Reducing Burden

DOE should use concept papers as the default first stage for competitive solicitations. Programs that want to skip them should be required to justify the exception. The concept paper itself should be short enough that a company can prepare it without significant diversion from its core business. DOE's own Inclusive Innovation RFI received direct feedback that applications are too complex for organizations without prior federal experience²², and the National Academies found that ARPA-E's most successful projects came disproportionately from small companies and university researchers – the populations most deterred by heavy application processes²³. The tradeoff is real, since reviewing concept papers takes staff time, but the net effect is less total review burden, because the full-proposal pool is smaller and better matched.

DOE should match funding mechanisms to needs in a more consistent and deliberate manner. Prizes carry the lowest barrier to entry, other transactions offer flexibility on IP, and reporting requirements can

be modified from one solicitation to the next. Matching the tool to the applicant and award size would help ensure the cost of applying is proportional to what is at stake. The choice of funding mechanism also helps reduce burden on the program manager and the applicant. Full treatment of funding tool selection warrants its own analysis; this paper raises it because the choice of mechanism is one of the first things a potential applicant encounters and one of the first reasons they may decide not to proceed.

DOE should apply a decision-essential standard: if a requirement does not help DOE evaluate whether to fund the work, it should not be part of the application. This fix has two dimensions: what is asked and when it is asked. Applications have accumulated requirements that serve DOE's post-selection workflow more than its funding decisions. Many items currently collected at the application stage are compliance requirements that could move to post-selection at no cost to decision quality.

²¹ Geraint Rees and James Wilsdon, "Could Agentic AI Topple Grant-Funding Systems?," Nature (Comment), April 27, 2026, <https://www.nature.com/articles/d41586-026-01297-y>.

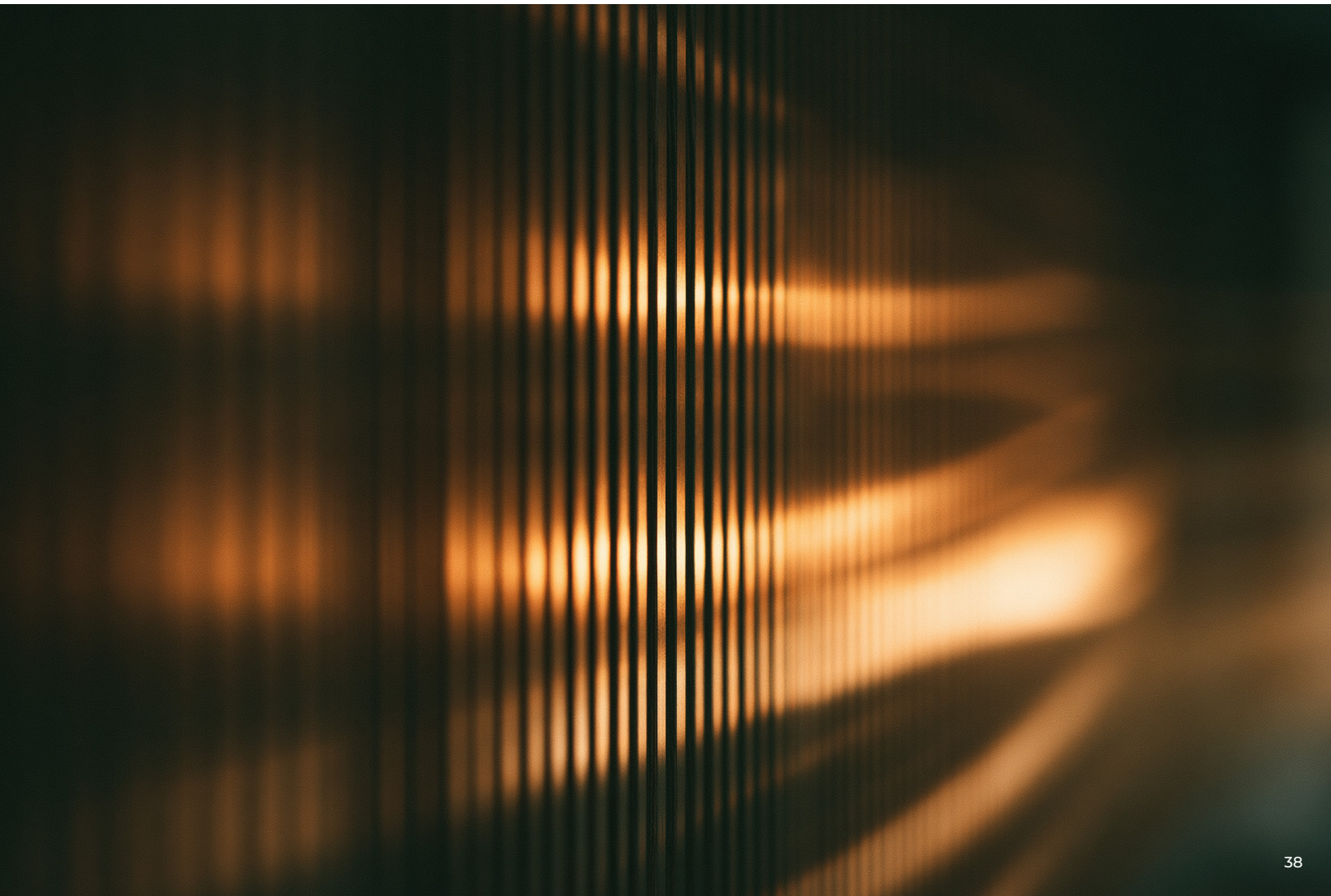
²² Summary: Responses to the Request for Information on Inclusive Innovation and Entrepreneurship in Climate Technology, February 2022, <https://www.energy.gov/sites/default/files/2022-02/summary-report-rfi-inclusive-innovation-entrepreneurship-climate-technology-81767.pdf>.

²³ National Academies of Sciences, Engineering, and Medicine, An Assessment of ARPA-E (Washington, DC: The National Academies Press, 2017), <https://doi.org/10.17226/24778>.

This is not about stripping applications to statutory minimums as they serve as a useful backstop when there is disagreement about what is truly necessary. However, the practical standard should be whether the information helps DOE make a better funding decision at that stage of the process to achieve its goals.

DOE should release objective-based solicitations to solicit a wider range of approaches. DOE's applicant pool is shaped by who fits the prescribed technical path rather than who can best solve the problem. The question is what to do about it given that narrow topics are a response to real pressures. Most obvious is that narrow topics are genuinely easier to

evaluate as reviewers can compare proposals against a defined technical benchmark, rather than weighing fundamentally different approaches against each other. The challenge is not to eliminate narrow topics but to ensure they are not the only option. Rather than specifying the technology, objective-based solicitations define measurable outcomes (a performance target, a cost threshold, a deployment timeline) and invite applicants to propose their own approach. A solicitation scoped around a specific battery chemistry excludes the company whose novel manufacturing process could achieve the same targets through a different path. A solicitation defined by outcomes would catch both.



The Operational Design

09

The Operational Design

For each recommendation, this section covers what it is, what authority it requires, how to implement it, what a realistic first step looks like, and what risks and open questions remain. The goal is to make each recommendation concrete enough that DOE staff can see its value and how to implement it. These reforms can be implemented independently, but they work best together.

9.1 Recommendation 1.1: Centralized Online Portal for all DOE Funding Programs

What it is. A single, searchable location listing all competitive funding opportunities across DOE with structured listings covering technology area, funding range, mechanism type, eligibility, and status. The portal includes open programs, data on closed programs (including selection rates and awarded projects), and a forward-looking solicitation schedule (Recommendation 1.2) showing anticipated funding six to twelve months out. Users can tag areas of interest and receive alerts when opportunities move from planned to open.

Authority. Administrative action under general DOE administrative discretion and 42 U.S.C. § 7256, which authorizes the Secretary to organize and manage Department functions as needed to carry out its mission. DOE can stand up and manage the portal under its existing organizational mandate.

Implementation. DOE should designate the Office of Management (MA) to own and maintain the portal in collaboration with the Secretary's office and Public Affairs. MA reports to the Secretary's office which will give it the authority needed to manage this process neutrally and successfully. MA should work with Public Affairs to set up the portal within DOE standards (messaging, color schemes, etc.). Once approved, MA should be empowered to own it completely. Building a portal requires interoffice coordination and modest IT investment for build out and upkeep. The first version

does not need to be technically sophisticated but should start from scratch rather than through existing platforms. A structured, searchable listing on energy.gov covering TRL expectations, areas of interest and not of interest, eligibility, award sizes, number of awards and more with consistent formatting across offices would be a meaningful improvement to the status quo. It could be based on DOE's current Exchange system²⁴.

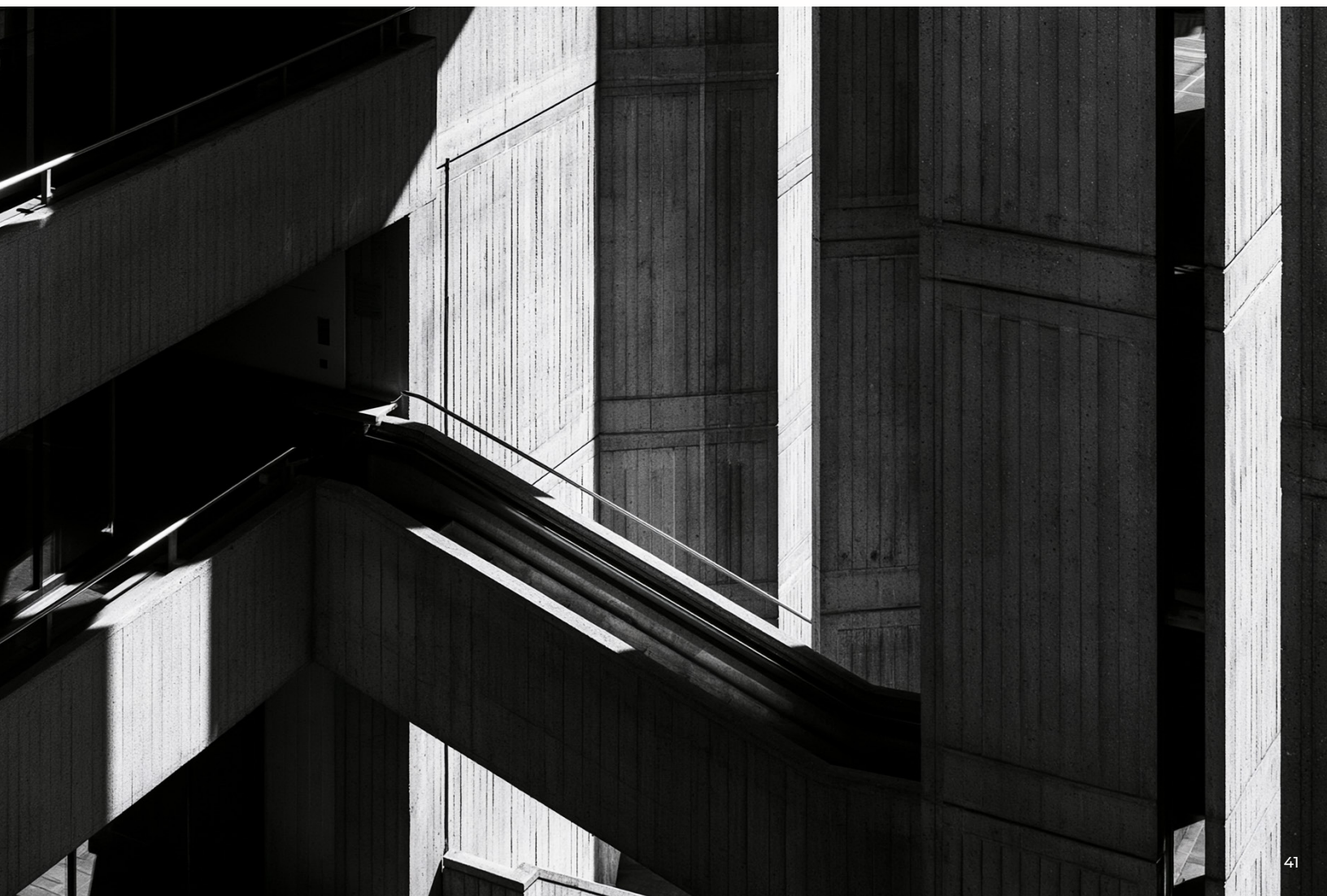
Over time, the portal should add features: keyword alerts, mechanism-type filters, and structured data feeds that allow third-party tools (including AI) to aggregate and surface the information. AI can supplement the portal by helping companies match with opportunities, but should not replace the need for a transparent, comprehensive, human-readable source. This portal must integrate with existing federal infrastructure given that DOE financial assistance opportunities are already required to post on Grants.gov, and recipients must register in SAM.gov. The portal should link to or pull from these systems rather than creating a parallel process, ensuring applicants encounter a single coordinated entry point.

First step. It will be critical to get DOE leadership support and direction to build such a portal and determine which office should build and manage the portal. Without top-down direction there is the risk such a portal fails to reach its promise or does not get built at all.

²⁴ One example is <https://infrastructure-exchange.energy.gov/>

Once there is leadership support, the office director overseeing the portal could begin by compiling a single page listing every active competitive opportunity in their office, with consistent formatting and plain-language descriptions. That page could be live within a few months. Scaling it department-wide is a coordination challenge which can be managed with strong leadership making it a priority for the agency.

Risks and open questions. Website consistency across administrations is a challenge. DOE web pages get deleted, reorganized, or moved when leadership changes. A portal is only useful if it persists. DOE should establish best principles for web presence continuity by treating the portal as required and bipartisan infrastructure. The portal should be apolitical doing the narrow task of conveying what funding from DOE is out there or coming. The organizational home for the portal matters: it should sit in an office with cross-departmental reach and a mandate that survives administrative reorganizations.



9.2 Recommendation 1.2: Future Solicitation Schedule

What it is. A forward-looking schedule of planned solicitations published six to twelve months out, integrated into the solicitations portal. For each planned solicitation, the schedule includes the technology area and expected readiness level, a plain-language description of the funding goal, approximate funding range and number of anticipated awards, mechanism type, eligibility expectations, technology maturity, and anticipated release timeline. Entries are marked as tentative or confirmed, and users who have tagged areas of interest on the portal receive alerts as solicitations move from planned to open.

Authority. Administrative action under the same general authority as Recommendation 1.1 (42 U.S.C. § 7256). Publishing a forward-looking schedule does not require new legal authority; it requires program offices to share, in a public-facing form, planning information they already compile internally.

Implementation. DOE offices develop internal planning documents, including the submissions to Congress that outline planned funding activities ahead of a fiscal year to allow for feedback. They contain much of the information needed to publish a forward schedule, including details on technology areas, approximate funding levels, and anticipated timelines. A forward schedule would not require offices to generate new information — it would require them to share a version of what they already compile internally to the portal.

The key design decision is how to handle uncertainty. Continuing resolutions and late budgets mean the numbers keep shifting once initial planning is done. The public-facing schedule should acknowledge this directly. Entries marked as tentative with a clear caveat that details may change based on available funding are more useful than no information at all. Updating a forward schedule in response to new information signals that DOE is being transparent and responsive,

not that it failed to plan. The schedule should be updated quarterly at minimum, with changes noted so applicants can track what has shifted and why.

First step. Implementation depends on the same leadership support as 1.1 but has a different implementation path. The portal is primarily a technical and coordination challenge. The forward schedule is a cultural one as it requires offices to accept that sharing planning information externally is a net positive even with the risk. A pilot with one or two willing offices would demonstrate the concept without requiring department-wide buy-in at the outset. The pilot office can publish its planned solicitations for the coming twelve months on the portal with tentative designations and quarterly updates. If the result is better-targeted applications and fewer poorly matched submissions, the case for scaling becomes easier to make.

Risks and open questions. The primary risk is that the federal budget process makes forward planning difficult. A related challenge is granularity — offices may resist sharing budget-level detail for planned solicitations, particularly when appropriations language is still being finalized. However, once a budget has passed, the offices have all they need to share their plans. In addition, DOE having no year money²⁵ allows it to message more confidently than agencies where funds are swept up at the end of each fiscal year. If there is internal concern, the schedule does not need to include precise dollar amounts to be useful. Approximate ranges, technology areas, and anticipated timing give companies enough to make informed decisions about where to invest their preparation effort.

²⁵ No-year (or “X-year”) funds represent budget authority available for obligation indefinitely until expended, regardless of fiscal year. <https://www.congress.gov/crs-product/R48087>

9.3 Recommendation 2: Simplified, Standardized, and Transparent Application Architecture

What it is. Three changes to how DOE structures its solicitations and communicates what applicants are committing to:

1. **Reduce application requirements to what is decision essential.** If a requirement does not help DOE evaluate the technical merit of the work, it should not be part of the application. Many items currently collected at the application stage are compliance requirements that could move to post-selection at no cost to decision quality.
2. **Publish applicable terms and conditions (T&Cs) alongside each solicitation.** Every funding opportunity should include the specific T&Cs that will govern the award, accompanied by a plain-language guide explaining what each provision means in practice. This allows applicants and their counsel to assess the commitment before investing time in an application, rather than discovering contractual terms during post-selection negotiations when leverage and options are limited.
3. **Give applicants early visibility into process and timeline.** Currently, companies have limited information about how long the process will take, what the selection criteria are, or what happens between submission and award. Making this information explicit lets companies plan resources and make informed go/no-go decisions.

Authority. Administrative action with General Counsel (GC) coordination. Reducing application requirements is within the discretion of each program office. Publishing terms and conditions alongside solicitations requires coordination with the Office of the General Counsel and MA to confirm which terms apply to each funding mechanism and to develop plain-language

companion materials. This requires GC to approve public-facing language explaining provisions that have historically been shared only during negotiations.

Implementation. The three components can be pursued in parallel but have different timelines. Reducing application requirements is the most straightforward: each program office reviews its current template and applies a decision-essential standard — does this requirement help evaluate the technical merit? If not, it moves to post-selection. A periodic review mechanism would prevent requirements creep where items removed in one cycle get added back in the next. Publishing terms and conditions requires GC coordination to identify applicable terms per mechanism and draft plain-language companion materials. The plain-language front page and T&C publication described in Section 7.2 are the core applicant-facing components of this change.

First step. The plain-language front page is the lowest-lift component and could be adopted immediately. Any program office issuing a new solicitation could add a two-page summary to the front of its next funding program documentation without requiring cross-office coordination or GC approval. The summary template could be standardized across the department over time, but the first step is simply doing it. For publishing T&Cs, a natural starting point is for one or two offices to pilot the practice with their next solicitation — including the applicable T&Cs and a one-page plain-language guide alongside the funding opportunity announcement. If the pilot surfaces no issues (and it likely will not, since the terms themselves are not new), the practice can be extended department-wide through a policy memo from the head of MA or the Secretary's office.

Risks and open questions. The risks are minimal. Application materials can always be added back if they prove genuinely needed. Publishing terms and conditions does not eliminate the ability to negotiate terms for individual awards. It establishes transparency about the starting point, which reduces the cost of initial assessment for applicants and surfaces

issues earlier for DOE. The more significant risk is organizational inertia: some offices may view T&C publication as creating a negotiating disadvantage, though in practice early transparency reduces post-selection surprises and failed negotiations on both sides.

9.4 Recommendation 3: Funded Intermediaries for Outreach and Application Support

What it is. As described in Section 6.3, many potential applicants are not searching for DOE funding and will only find their way to DOE through trusted intermediaries. DOE should systematically fund intermediary organizations to identify potential applicants outside its existing network and help first-time applicants navigate the process.

Authority. DOE already has the legal tools to fund intermediaries through project intermediary agreements and other contracting mechanisms. DOE has precedence for using these authorities to fund what it called Power Connectors. Power Connectors are competitively selected organizations tasked with bringing a greater diversity of applicants to a prize program. The model proved successful, so offices elected to use these Power Connectors to support more broad connection of entrepreneurs to solicitations beyond prizes. The Foundation for Energy Security and Innovation (FESI), a recently established foundation tied to DOE, is one entity that could support this work given its mandate includes outreach to applicants and bringing private sector resources to DOE programming. FESI represents one piece of a broader intermediary infrastructure; not the whole solution. Sustained budget allocation and institutional buy-in is needed to treat intermediary

infrastructure as a sustained investment rather than a one-off project.

Implementation. This effort should be housed in the Office of Technology Commercialization (OTC), which has the broadest mandate in this space and manages DOE's relationship with FESI. OTC would need dedicated funding for this purpose, as intermediary infrastructure cannot be built from existing program budgets already committed to research and development. Intermediaries require multi-year funding cycles to be effective. The intermediary network should be structured to avoid geographic and sectoral concentration, funding organizations with reach into regions, industries, and company stages underrepresented in DOE's applicant data. Intermediaries should be equipped for both outreach and navigation support, helping first-time applicants understand program fit, mechanism differences, and cost share requirements. The portal and forward schedule make intermediaries more effective by giving them a comprehensive, up-to-date tool rather than relying on ad hoc monitoring of DOE announcements. This means OTC and MA will need to be in close coordination on the portal to ensure intermediaries are conveying the most up to date and correct information.

First step. A willing technology office could designate a portion of its next funding cycle to intermediary support, using existing PIA or contracting authorities, with a multi-year commitment and explicit expectations for reach beyond DOE's current applicant base. The SBA Growth Accelerator program offers a useful external model: since 2014, SBA has awarded over 600 prizes to accelerators supporting small business innovation, demonstrating that federal intermediary funding can work at scale.²⁶ DOE's version would need to be adapted to its own mission and applicant population, but the concept is proven.

Risks and open questions. Intermediaries should help companies become aware of opportunities and support their applications. They should not serve as filters deciding which companies are worthy of application. The decision about who merits an award belongs to

the DOE's merit review process. The goal is to provide a wider, better-informed applicant pool, not added gatekeeping. The selection of intermediaries themselves requires care to ensure the network does not end up over-indexed to a particular region, technology, or type of business. In addition, DOE needs to provide oversight to ensure intermediaries do not favor their own portfolio companies over the broader reach they are expected to provide.

There are also outstanding legal questions about what DOE can and cannot fund in the way of applicant support — this needs careful scoping from the General Counsel's office. The funding mechanism for intermediaries (grant, contract, or embedded in existing programs) is an open question, as is how to measure intermediary effectiveness without creating perverse incentives that reward volume over quality.



²⁶ The Small Business Administration's Growth Accelerator Fund Competition
<https://www.congress.gov/crs-product/IF12310>

9.5 Recommendation 4: Staged Application Process with Concept Papers as Default First Stage

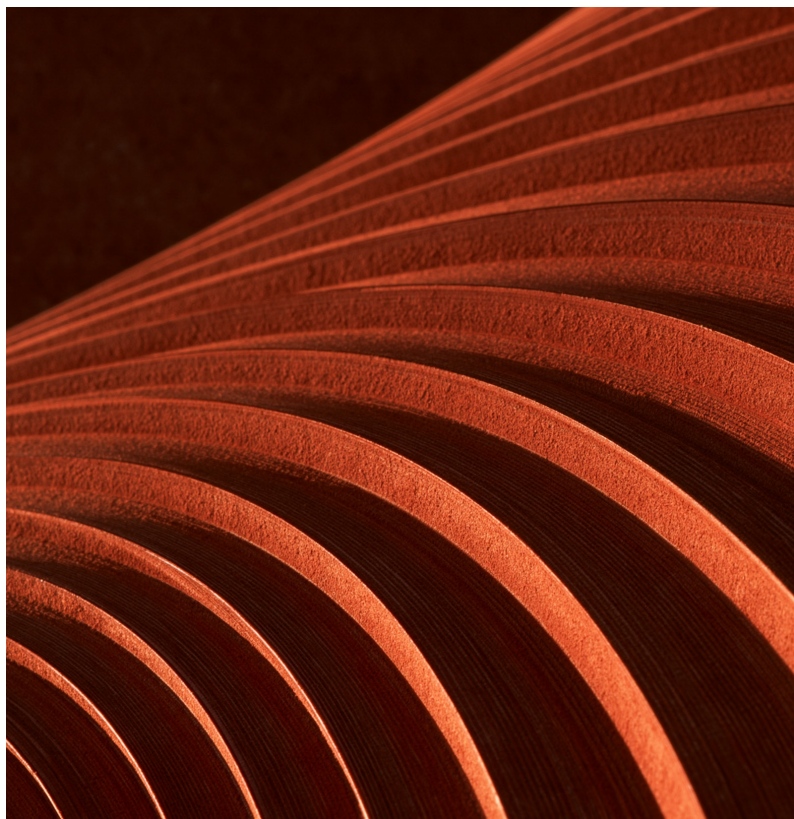
What it is. Use concept papers — or a similar lightweight initial submission — as the default first stage for all DOE competitive solicitations. A concept paper is a brief document (a few pages) describing the technology, the problem it addresses, alignment with the solicitation’s objectives, and the team’s qualifications. DOE should review concept papers and invite only the most competitive applicants to submit full proposals. Programs that choose not to use a first-stage screen must justify the exception to their office director or equivalent leader.

Authority. The decision to reinstate and standardize concept papers sits with program offices and their leadership.

Implementation. The two-stage concept paper and full proposal approach gives applicants time between stages to secure teaming partners and cost share commitments, both of which are difficult to assemble without knowing if the idea has a chance. Concept papers are the most proven mechanism, but the filter could take other forms depending on the program such as a short pitch, a slide deck, a video submission, or another low-effort demonstration of fit. Every DOE solicitation should have an initial screen that costs applicants’ days rather than months and gives DOE a manageable pool before full review begins.

First step. Any program office issuing a new solicitation should add a concept paper stage to its next competitive funding opportunity without requiring cross-office coordination. The harder step is making it the default approach. That requires a policy decision from leadership (at the individual office level or higher) to establish concept papers (or equivalent first-stage screens) as standard practice. A pilot tracking application volume, applicant diversity, and review burden before and after concept paper reinstatement would build evidence for department-wide adoption.

Risks and open questions. Reviewing concept papers and providing feedback adds a stage to the process, which extends the timeline from solicitation to award. For applicants managing cash flow and investor expectations, a longer overall process is a real cost. The mitigation is that the added time is front-loaded and low-cost for applicants and the alternative (submitting a full application blind) carries higher risk for everyone. Finding qualified reviewers in a timely manner is an existing challenge; concept papers can reduce the volume of material in need of expert review and let DOE know the kinds of expertise they will need in their reviewer pool.



9.6 Recommendation 5: Objective–Based Solicitation Tracks

What it is. Each DOE appropriations account designates a portion of its competitive funding for objective solicitations, those that define a measurable outcome (a performance target, a cost threshold, a market need, or deployment timeline) without prescribing the technology pathway to get there. It is a disciplined, yet flexible frame that indicates to applicants what DOE needs to achieve and lets them demonstrate why their approach is the best. DOE should be defining problems or needs and supporting innovations that fall within the white space between offices and technology areas (e.g., work that does not fit neatly into any one program’s framing but could advance DOE’s broader mission).

The evaluation criteria shift from technical approach alignment to outcome credibility: can the applicant demonstrate that their approach is likely to meet the stated objective, and do they have the team and resources to execute? This requires reviewers to be comfortable assessing fundamentally different approaches against the same outcome standard, which is one reason concept papers are a natural complement. They provide the lightweight first-stage screen that makes a broader aperture manageable. Objective-based solicitations do not replace narrow-topic solicitations where Congressional direction or technical specificity warrants them. They create a parallel track. The AFWERX data cited in Section 8.1 supports this approach: when the aperture widens, the companies DOE discovers are not marginal – they are new entrants with approaches DOE would not have prescribed.

Authority. This is a medium-to-high lift because it requires a cultural shift with administrative action. DOE’s default is to scope solicitations around specific technologies, which aligns with how appropriations are structured and how program managers think about their portfolios. Moving toward objective–

based framing requires DOE leadership to decide that a portion of each account’s competitive funding should be structured differently. The precedent exists: ARPA-E’s open programs and AFWERX’s open-topic solicitations²⁷ demonstrate that federal agencies can define outcomes rather than prescribing solutions within existing authority.

Implementation. The design challenge is framing objectives that are specific enough to evaluate but broad enough to attract diverse approaches and achieve outcomes built for DOE’s mission and priorities. An objective-based solicitation defines a clear problem (e.g., decarbonize cement production by 40 percent or reduce the cost of a specific class of long-duration storage to a specific threshold) and asks applicants to propose their solution.

First step. A willing technology office designates one solicitation in its next funding cycle as objective-based: a defined outcome, no prescribed technology pathway, with a concept paper first stage. The office tracks which applicants apply (new entrants versus incumbents), what approaches emerge, and whether the resulting portfolio differs from its narrow-topic solicitations. If the pilot produces the kind of applicant diversity the AFWERX data suggests, the case for scaling to a 20 percent floor becomes concrete rather than theoretical. The pilot should be paired with the portal and forward schedule to maximize visibility among the companies this approach is designed to reach.

Risks and open questions. The primary risk is volume. A broader aperture invites more applications, and in a world where AI makes generating proposals easy, objective-based solicitations without guardrails could flood DOE with submissions. Two other changes mitigate this: Recommendation 4 filters volume through concept papers before full review, and Recommendation 1.2 enables applicant self-selection through forward scheduling. Together they make a broader aperture manageable; without them, this recommendation

would be difficult to implement responsibly. A second risk is appropriator perception — Congress funds specific technology areas and expects related outcomes. Objective-based solicitations can satisfy this by drawing objectives from Congressionally directed areas, framed as outcomes rather than prescribed solutions. The open questions are practical: is 20 percent the right floor, what evaluation criteria work, and does DOE have reviewer pools comfortable with cross-cutting technical assessment?



Conclusion

DOE's competitive funding programs and the technologies they support reach markets, attract private capital, and strengthen U.S. competitiveness and energy security. They also help advance the clean energy transition. Implementing this Blueprint's five recommendations allows DOE to make a greater impact, supporting the full breadth of technologies and solutions.

Every recommendation in this paper is designed to strengthen the federal energy innovation complex. These five changes make the system it already operates more visible, comprehensible, and less burdensome to navigate so that the quality of DOE's applicant pool reflects the full breadth of American energy innovation, not just the fraction that already knows how to find the front door.

All five recommendations are within DOE's existing administrative authority. What they require is leadership making the deliberate decision that opening the front door wider is a core operational priority of the department. The leadership that does this has an opportunity to usher in an era of even greater impact for DOE funds at a critical time for globally competitive industries.

The return on these changes is likely substantial. Stronger applicant pools mean better-funded energy innovation programs. More diverse entrants mean technologies DOE would not have discovered under its current defaults. Transparent processes mean fewer awards that collapse in negotiation and less staff time spent managing confusion. Every dollar DOE invests in accessibility comes back in the quality of the work it funds, the level of follow-on private investment, and the speed with which that work reaches the market.

America has the best innovators in the world, more private capital chasing them than anyone, and breakthroughs like fusion, advanced nuclear, and long-duration storage ready to power our future. Now we're at risk of losing it. Our best breakthroughs are getting commercialized by competitors because the system that turns invention into industry moves at the pace of the last century, not this one. That system runs through the federal government where the tools to move breakthroughs to market were built to move a handful at a time, not at the scale this moment demands. We must reform innovation support systems to scale advanced technologies faster than competitors can copy them.

If we get it wrong, America continues to invent the breakthroughs here while someone else builds the industry. Our innovations are stranded at home for lack of support and taken commercial abroad with the factories, jobs, and strategic advantages that follow. But get it right, and America thrives. This Blueprint and opening DOE's front door is step 1.

Appendix 1: DOE Funding Mechanisms Defined

DOE has the authority to use several distinct funding mechanisms, each designed for a different relationship between the government and the recipient. The choice of mechanism affects the application burden, the terms and conditions an awardee must accept, the level of DOE involvement in the work, and the cost share requirements. This appendix provides a brief overview of the mechanisms referenced in this paper.

Grants. A grant is a financial assistance instrument in which DOE provides funding to support a project but does not have substantial involvement in the work. The recipient designs and executes the project with reporting obligations but without the ongoing federal oversight that characterizes cooperative agreements. Grants generally do not require cost share at the same rates as cooperative agreements, making them more accessible to smaller organizations. They are most commonly used for basic research and early-stage work where DOE's role is to fund, not to direct.

Cooperative Agreements. A cooperative agreement is a financial assistance instrument similar to a grant but with one critical distinction: DOE has substantial involvement in the project. This can include technical collaboration, milestone reviews, and ongoing oversight of the work. Cooperative agreements are the most commonly used mechanism for DOE's applied research, development, and demonstration programs. They carry a full suite of federal terms and conditions including cost share requirements that scale with technology readiness level. The compliance burden is higher than other mechanisms, which is appropriate for large, complex awards but can be disproportionate for smaller awards or early-stage companies.

Prizes and Challenges. Prize competitions allow DOE to define an outcome and reward whoever achieves it. Applicants do not receive funding upfront; they compete to demonstrate results, and the

winner receives the award. Prizes carry the lowest administrative burden of any DOE funding mechanism — no cost share, minimal reporting requirements, and simplified terms. They are particularly effective at attracting new entrants who have never worked with the federal government. The American-Made Challenges program is DOE's primary prize platform.

Other Transactions (OTs). Other transaction authority allows DOE to enter into agreements that are not standard grants, cooperative agreements, or contracts. OTs offer significant flexibility: DOE can negotiate custom terms on intellectual property, data rights, cost share, and reporting. This makes them well suited for working with commercial-stage companies or situations where standard federal terms would be a barrier to participation. OTs are underused relative to their potential, partly because not all offices are familiar with the authority or comfortable departing from more established mechanisms.



Project Intermediary Agreements (PIAs). A project intermediary agreement allows DOE to fund an intermediary organization — such as an accelerator, incubator, or other entity — which then manages sub-awards to individual companies or projects. PIAs are useful when DOE wants to reach a large number of smaller recipients or when the intermediary has expertise in identifying and supporting the target applicant population. The intermediary handles much of the administrative burden, which can make DOE funding more accessible to organizations that lack the capacity to manage a direct federal award.

Procurements (Contracts). A procurement contract is used when DOE is purchasing a specific good or service. Unlike financial assistance instruments (grants and cooperative agreements), contracts give DOE direct control over the work and typically include the most detailed terms and conditions. Contracts are the appropriate mechanism when DOE needs a defined deliverable, but they carry the highest compliance burden and are generally not suited for funding innovative research or early-stage technology development by startups and small businesses.



Appendix 2: How an Office Budget Winnows to New-Award Funding

Consider a single DOE technology office with three subprograms and a \$200 million annual appropriation. The list below walks through the competing claims on that budget, roughly in the order they reduce the funds available for new, openly competed awards. Dollar figures are illustrative.

What claims the budget

- **Congressional direction (≈\$50M tied to named technologies).** Congress directs the office at two levels. First, it sets floors by subprogram — for example, “not less than \$60M to subprogram A, not less than \$50M to subprogram B, and not less than \$40M for subprogram C.” Second, it earmarks specific technologies within those subprograms — for example, “at least \$10M to technology A and \$15M to technology B within subprogram A; at least \$20M to technology C and \$5M for technical assistance within subprogram B; no direction within subprogram C.” In this example roughly \$50M is tied to named technologies, and some offices receive even more granular direction. Where direction does not fill a subprogram’s floor, the office retains discretion over the remainder, pending leadership approval.
- **Statutory set-asides — SBIR/STTR (≈\$7.3M) and the Technology Commercialization Fund (≈\$1.8M).** Every office that funds R&D must reserve a fixed share of its budget for two government-wide programs before anything else. The Small Business Innovation Research and Small Business Technology Transfer programs together claim 3.65% (3.2% SBIR + 0.45% STTR), about \$7.3M here. The Technology Commercialization Fund claims 0.9% of applied R&D, about \$1.8M. These come off the top and are not discretionary.
- **Higher-level organizational needs (\$10M).** Each technology office sits within a larger organization. When leadership above the office has overarching needs or initiatives, they may request a set dollar amount or percentage from the offices beneath them to cover those programmatic costs.
- **Office support — support-service contractors (\$10M).** Offices pay for the support-service contractors who keep day-to-day operations running — a need that grows more acute as federal headcounts shrink — out of their own appropriated funds. (Federal staff salaries are funded through a separate line item, not the office’s program budget.)
- **Multi-year national-lab commitments (\$15M).** Offices sustain long-term research and critical capabilities — including staff and user facilities at the national labs — that must continue uninterrupted for research or facility-availability reasons. These commitments are typically made for 3–10 years at a time and must be honored (about \$5M per subprogram).
- **Rotating / continuity programs (\$15M).** Rather than re-running identical solicitations every year, offices often rotate through a set of topics on a multi-year cycle — commonly three topics over three years per subprogram — which is more manageable for both DOE and awardees, especially early-stage performers at labs and universities. Breaking this continuity risks losing momentum on critical research (about \$5M per subprogram).

- **Reactive funding reserve (\$5M).** Funding needs evolve within a year. As an industry shifts, it can make sense to fund timely analysis or responsive research, but this is hard to predict in advance. Offices therefore hold a reserve to deploy mid-year if needed, releasing it to a program or project if unused by year-end.
- **Crosscutting efforts (\$5M).** At the direction of DOE leadership or Congress, offices are often asked to contribute to multi-office or multi-agency initiatives, with funds dedicated to those purposes.

What remains

After these claims, roughly \$80.9M of the original \$200M — about 40% — remains for the office to allocate at its discretion, pending leadership approval. And only a portion of that discretionary pool typically becomes genuinely new, openly competed funding available to first-time applicants; the rest sustains continuing priorities. The practical result is that the front door for new entrants is far narrower than the office's topline budget suggests.

Assumptions: illustrative single office, \$200M, three subprograms; for simplicity, statutory set-asides are shown as top-line deductions. SBIR/STTR = 3.65% (3.2% SBIR + 0.45% STTR); Technology Commercialization Fund = 0.9% of applied energy R&D. Figures are illustrative.

