Alternative Fuels & Chemicals Coalition

Advocating for Public Policies to Promote the Development and Production of Alternative Fuels, Renewable Chemicals, and Bio-Based Products, with a Focus on Sustainable Aviation Fuels

FY2026 E&W Appropriations Requests

Name of Requesting Entity: The Alternative Fuels & Chemicals Coalition (AFCC)

Type of Entity: a 501-c-6 nonprofit organization **EIN:** 83-4721257

Office Location & Mailing Address: 1200 G Street, NW, Suite 880, Washington, DC 20005

Entity Heads & Lobbyists Contact Information: **(1)** Rina Singh, Ph.D., Executive Vice President for Policy, *Office:* 202-922-0144, *Cell:* 202-860-9008, *Email:* rina@altfuelchem.org
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AFCC represents 150+ member companies employing 600,000+ people and generating $350+ billion per year in revenues. These companies operate in MORE THAN 600 LOCATIONS in the U.S. THEY MANUFACTURE PRODUCTS AND DELIVER SERVICES THAT TOUCH *EVERY STATE AND COMMUNITY IN THE U.S.* and, due to economic ripple effects, THEY ADD JOBS, PROVIDE ECONOMIC STIMULUS, AND GENERATE LOCAL TAX REVENUES IN THESE COMMUNITIES, as well as adding to the quality of life and improving human health and the environment through the products and services they provide.

PLEASE NOTE: Because AFCC member companies contribute to the wellbeing of every State and State in the U.S., AFCC makes appropriation and legislative language requests to the members of 5 House and Senate appropriation subcommittees, nearly 90 offices in total, with a focus on 60 key programs that are important to its member companies.

It is therefore impossible for AFCC to fill out the individual appropriation request forms for 90 offices (since every request form is different) with requests for 60 different programs administered by 8 agencies. This form is designed to encompass the information that is most commonly requested by each office.

AFCC respectfully requests that you accept this form in lieu of requiring that AFCC fill out your appropriation request form. AFCC will gladly provide any additional information your office requires that is not included in this form.

INTRODUCTION

AFCC recognizes that it is extremely difficult for any Congressional office and its staff to fully understand the myriad federal programs on which Members must make decisions.

Many benefits that some programs can provide to constituents are not counted … or given weight … in the way that programs are scored in the appropriations process.

Moreover, if someone does not speak up for these programs and draw attention to their benefits, the logical conclusion is they are not important to a Member's constituents and can be scaled back or eliminated so their funds can be used elsewhere for programs that are priorities for the Member.

Virtually every program has advocates and detractors … each with their own agendas … and each with their own reasons for opposing or supporting specific programs … which may or may not be in the interests of a Member's constituents … or, for that matter, even completely accurate.

As British economist Ronald H. Coase once said, ***"If you torture data long enough, it will [say] anything you like."***

AFCC was established to speak up for the federal programs important to its member companies. It also strives to serve to as a resource … to provide information about the programs it supports … to emphasize their benefits to local communities and the nation … and to counter arguments directed toward undermining these programs.

AFCC welcomes the opportunity to discuss the programs for which it is making its FY2026 programmatic funding requests below – *each of which is a critical building block in advancing innovations from initial concept to commercial reality* – provide information on the benefits they offer your constituents and answer any questions you might have.

Rina Singh, Ph.D., and CJ Evans, whose contact information is provided at the top of page 1, are happy to schedule an in-person meeting or a Zoom call at your convenience.

Please email Sonja Fahy, AFCC's Administrative Coordinator, to let us know when it will be convenient to schedule a meeting or call. Sonja's email is: sonja@altfuelchem.org.

Programmatic Funding Request #1

Title of Request: Generating Revenues for the U.S. Treasury & Advancing U.S. Global Competitiveness

Request Type: Funding Request

Appropriations Subcommittee: Energy and Water Development and Related Agencies

Department: U.S. Department of Energy

Agency: Loan Programs Office

Account: Energy Programs

Program, Project, Activity Title: Title 17 Innovative Technology Loan Program and Advanced Technology Vehicle Manufacturing (ATVM) Loan Program

Priority: Not only do AFCC member companies contribute to the wellbeing of every State and State in the U.S., they also are innovators and emerging technology developers who are in the forefront of global market tends and, thus, offer the U.S. the capacity to capture and dominate these markets.

This is why these programs are AFCC'S #1 PRIORITY. The Title 17 Innovative Technology Loan Program and its sister program, the Advanced Technology Vehicle Manufacturing (ATVM) loan program are, in fact, **two of the most important funding programs in federal government** (as explained in "*Purpose & Justification for this Request*" below)… *despite their numerous detractors* (also as explained in "*Purpose & Justification for this Request*" below).

These loan programs benefit the federal government and taxpayers in multiple ways. They:

- **Generate revenues for the U.S. Treasury far in excess of their costs** (something that is not taken into account in their scoring),
- **Have a loss rate of only 3.1%,** which is comparable to the loss rates of the nation's top banks and other private sector financial institutions which avoid high risk loans and, instead, only offer traditional loans that are backed by collateral or extended to individuals and entities with good credit,
- **Are able to finance first-of-a-kind projects, which carry a high degree of risk.** The typical loss rate for venture capital firms that support startups and first-of-a-kind ventures, by comparison, ranges between 25% and 40%[1]. DOE's Loan Programs Office (LPO) is able to keep its loss rates low by thoroughly vetting projects during its rigorous application and

[1] Chandratillake, Suranga, "Venture Demystified: Loss Ratios in 2022/23 and what it could mean," Medium, September 5, 2022, https://medium.com/@suranga/venture-demystified-loss-ratios-in-2022-23-and-what-it-could-mean-40501f2f9c21

due diligence processes. Borrowers also are charged a credit subsidy cost[2] which is paid at financial close as a risk premium to offset any expected losses to the government from making a loan or issuing a loan guarantee,

- **Are one of the few ways in which first-of-a-kind projects can be financed** which, due to their high degree of risk, very few private sector financial institutions will consider,
- **Were created for this very reason** – to provide a bridge over "the valley of death," which has swallowed far too many innovations and cutting-edge projects that could have brought significant benefits to the American public, which we will never know or be able to enjoy, because they could not secure the capital necessary to take the final financial step toward commercial realization.

These are the programs that:

- **Gave Tesla its start**, by financing the acquisition of its Fremont California manufacturing facility (which had been idled by GM) along with the development and production of the Tesla Model S,
- **Financed the development and manufacture of Ford's EcoBoost motor,** which is now available in all Ford vehicles,
- **Financed the first utility-scale wind and solar projects**, which primed the pump for the private sector investments that have led to the massive growth of the wind and solar industries and the dramatic reduction in their costs **(see the attached "*Data Supporting the Exceptional Economic & Job-Generating Impact of Renewable Energy*").**
- **Financed the four-unit 4,563 MWe Vogel Nuclear Electric Power Generating Plant** in Waynesboro, Georgina, the largest generator of clean energy in the U.S.

Prior Year Funding Levels, Senate Appropriations Committee FY2025 Markup, & AFCC's 2026 Request:

Title 17 Innovative Technology Loan Program

FY 2022 Appropriation	FY 2023 Appropriation	FY 2024 Appropriation	FY 2025 Agency Request	FY 2025 Senate Markup	AFCC's FY 2026 Request
$32,000,000 less fees	$102,855,000 in addition to IRA	$71,362,000 in addition to IRA	$184,558,000 in addition to IRA	$55,000,000	**$120,000,000***

* AFCC's FY2026 request is one-third of the average of the FY2023 and 24 appropriations and the FY2025 agency request (see "*Purpose & Justification for this Request*" below)

[2] The credit subsidy cost, mandated by the Federal Credit Reform Act of 1990, is required to be paid at financial close for any federal loan or loan guarantee as a risk premium to offset any expected losses to the government from making a loan or issuing a loan guarantee.

	FY 2023	FY 2024	FY 2025	FY 2026	Maintain current IRA funding*
Inflation Reduction Act (IRA)	The IRA increased the lending authority for the Title 17 and ATVM programs **from $40 billion to $400 billion**, which **includes $11.7 billion to support issuing new loans** and **$3.6 billion to cover Section 1703 (innovative technology energy project) credit subsidy costs.**[2] The maximum amount of funding available for a single project now stands at $40 billion. The increased lending authority **includes $6.3 billion for Tribal Energy loans** and **$250 billion along with $5 billion to cover credit subsidy costs**[2] for a new loan program to finance energy infrastructure projects, including projects that retool, repower, repurpose, or replace existing energy infrastructure that has ceased operations.				

* see "*Purpose & Justification for this Request*" below

Advanced Vehicle Technology Manufacturing Loan Program

FY 2022 Appropriation	FY 2023 Appropriation	FY 2024 Appropriation	FY 2025 Agency Request	FY 2025 Senate Markup	AFCC's FY 2026 Request
$5,000,000	$9,800,000 in addition to IRA	$13,000,000 in addition to IRA	$27,508,000 in addition to IRA	$20,000,000	**$20,000,000**
Inflation Reduction Act (IRA)	**FY 2023**	**FY 2024**	**FY 2025**	**FY 2026**	**Maintain current IRA funding***
	The IRA removed the $25 billion cap on ATVM loan authority and appropriated $3 billion to cover credit subsidy costs.[2]				

*see "*Purpose & Justification for this Request*" below

Purpose & Justification for this Request: The Title 17 and ATVM programs do *what private sector lenders won't do:* lend to high-risk, first-of-a-kind projects.

Because of this, these programs are the nation's most effective pathways to deploy new technologies, advanced manufacturing processes, and sustain an ongoing conduit of job-creating, local-economy-growing, local-tax-generating, and global-market-capturing projects. **They:**

1. **Allow U.S. entrepreneurs and entities to take advantage of and benefit from global market trends.**

> As Will Rogers famously said, ***"Even if you are on the right track, you'll get run over if you just sit there."***

To remain competitive globally, U.S. companies must constantly track market trends and innovate. **Two global market trends that will dominate future decades are:**

- **The phase out of the sale of internal combustion vehicles.** According to Statista, a global data and business intelligence platform that tracks statistics, issues reports, and provides insights on over 80,000 topics from 22,500 sources in 170 industries:

  "***As of 2024, 60 countries and territories around the world had set targets, signed pledges or announced plans to phase out gasoline and diesel cars by a concrete date*,"**

  beginning with Norway, Ethiopia, and, in part, Singapore in 2025, followed by 6 countries in 2030, 25 countries in 2035, 22 countries in 2040, and 4 countries in 2050.

- **The expansion of renewable energy.** According to the Global Electricity Review, global growth in wind and solar pushed renewables to provide more than 30% of global electricity, based on electricity generation in 2023, covering 80 countries representing 92% of global electricity demand. See the attached "*Data Supporting the Exceptional Economic & Job-Generating Impact of Renewable Energy.*"

These are trends over which the U.S. has very little influence or control. **U.S. companies, as Marianne Williamson said, "*must either get on the train or be left behind.*"**

2. **Allow the U.S. to be energy dominant in competing with China as well as other countries in global markets.** The DOE loan programs allow the U.S. to not only expand domestic manufacturing, with a focus on growing, building, using, and selling American products here, but to expand U.S. energy dominance worldwide. Any loss in the availability of financing to advance innovations and first-of-a-kind technologies will not only stunt the ability of U.S. companies to grow, build, use, and sell American products here, but to capture large shares of emerging and global markets and dominate these markets in the years to come. ***Anywhere that U.S. companies do not or cannot go, China will.***

3. **Make money for the U.S. Treasury. The Title 17 and ATVM programs have generated $4.9 billion in earnings for the U.S. Treasury from interest payments on the Title 17 and ATVM loan obligations, as of the end of 2023.**

   There has been an average of approximately 30 active loans and loan obligations during the 14 years (2009-2023) since the first LPO loan was issued to Ford Motor Company to complete the development and manufacture of its EcoBoost motor. The average amount of interest earned by the U.S. Treasury during this period of time was $350 million per year.

There are now 45 active loans. In addition, 15 conditional commitments have been issued to provide additional loans to cutting-edge projects, and there are more than 160 applications that have been under review by the LPO seeking over $200 billion to develop their projects.

If an average of 30 active loans have generated $350 million per year for the U.S. Treasury in the 14-year period between 2009 and 2023, it is fairly easy to see how much the U.S. Treasury will make from the current group of active loans (*$525 million per year*), the 15 conditional commitments (*an additional $175 million per year*), and the 160 projects in the LPO pipeline (*an additional $1.87 billion per year*).

At a time when budgets are being cut and savings are being sought in federal government expenditures, ***it does not make sense to eliminate, or even cut back, a program that is on track to earn, within a few years, more than $2 billion per year for the U.S. Treasury*** *… and that is from just the projects that the LPO currently has in place and under review.*

The Leading Criticisms of These Programs

The features of the Title 17 and ATVM programs, as described above are, unfortunately, not well understood, not taken into account, or are ignored by their detractors. These programs have been criticized for:

1. **The Failure of Solyndra:** This criticism has hung over the Title 17 program for more than a decade and continues to persist. However:

   This ignores that the Title 17 and ATVM programs:
   - ✓ Were established specifically to advance high-risk, first-of-a-kind projects which typically have a high failure rate,
   - ✓ Thus, some projects will fail.

   This ignores that:
   - ✓ The average failure rate experienced by private sector venture capital firms that invest in startups and first-of-a-kind technologies is 25% to 40%, and
   - ✓ The LPO's failure rate for the loans and loan guarantee obligations it has issued over its 15-year lifetime is 3.1%, which closely matches the failure rates of major U.S. banks and financial institutions which are not willing to financing high-risk ventures, with financing only available for good-credit and collateral-based business and personal loans.

   This also ignores that:
   - ✓ These programs have more than made up for their losses which, according to the LPO's 2023 annual report, amounted to $1.03 billion at the end of 2023, which is less than one-quarter of the $4.9 billion in interest that has been earned by the U.S. Treasury from the LPO's loans over the same period of time.

2. **Usurping the Private Sector by Performing Private Sector Functions:** Projects that incorporate first-of-a-kind technologies, materials, and processes come with a high risk of failure; hence, they are only very rarely financed by traditional lenders.

   Virtually every one of the projects that has been financed by the Title 17 and ATVM programs almost certainly would not have been financed by the private sector and, thus, would not exist today without the LPO's loan programs.

   This means that the nearly 50,000 jobs that were created by the 30 projects that were active at the end of 2023, and the economic stimulus and tax dollars that these projects have brought to the 90 local communities in which their operations were located, would not have occurred had the Title 17 and ATVM financing had not been available.

3. **Project 2025:** Project 2025 states that the "Administration should prioritize energy and science dominance to ensure that Americans have abundant, affordable, and reliable energy; create good-paying jobs; support domestic manufacturing and technology leadership; and strengthen national security."

   AFCC strongly supports this statement. While AFCC agrees that the nation should prioritize the use of domestic content and domestic manufacturing, AFCC also feels strongly that the U.S. must continually monitor and analyze global market trends, two of which are listed above, to ensure that the nation's policies and investments are aligned in ways that will propel the U.S. toward market dominance.

Project 2025 calls for:

- ✓ The repeal of "massive spending bills like the Infrastructure Investment and Jobs Act (IIJA)3 and Inflation Reduction Act (IRA), which established new programs and are providing hundreds of billions of dollars in subsidies to renewable energy developers, their investors, and special interests," and the recission of funds not already spent by these programs, as well as
- ✓ The elimination or significant reform of the DOE Loan Program, as well as the elimination or reform of two other DOE programs supported by AFCC and its member companies which are included in AFCC's FY2026 E&W appropriation requests, the Advanced Research Projects Agency – Energy (ARPA-E) and the Office of Clean Energy Demonstrations (OCED).

It should be noted that:

- ✓ Project 2025's characterization of renewable energy ignores the massive impact that renewable energy – and the investments made in renewable energy – have had in:
  - creating jobs
  - adding additional energy resources to the grid

- the speed at which new energy systems can be built and placed in operation
- and the much lower costs of construction and operation of renewable energy systems per megawatt hour compared to traditional energy systems
- as cited in the sources quoted in the attached ***"Data Supporting the Exceptional Economic & Job-Generating Impact of Renewable Energy."***

✓ Project 2025's suggestion that the U.S. should turn away from further investments in renewable energy would undermine the nation's ability to capture greater shares of the two, expanding global market trends described above, in which the U.S. already is a global leader and could gain global dominance … but only if it continues to invest in these markets.

*As H.G. Wells said, "**Adapt or perish,**" a warning amply illustrated by the graveyard of firms that failed to adapt to the online shopping revolution.*

Again, anywhere that U.S. companies do not or cannot go, China will.

4. The OIG Conflict of Interest Interim Report: U.S. Senator John Barrasso (R-WY), a senior member of the Senate Committee on Energy and Natural Resources (ENR), called for the suspension of the DOE Title 17 loan program following release by the Office of Inspector General of a December 17, 2024 interim report that charged the Loan Programs Office with "not managing organizational conflicts of interest in compliance with regulations."

The OIG found that the LPO did not collect information about and track the 300+ contractors and third-party experts that it had hired to assist with loan processing and legal, engineering/technical, market analysis, and financial/credit due diligence and, thus, was unable to ensure that the contractors were not working for one or more prospective borrowers on the same or other projects.

This is a clear and egregious breach of the LPO's responsibility to ensure that each application is treated fairly and equally and is judged on its merits without bias or a vested interest in the applications under review.

Once this issue first came to light, the LPO should have taken immediate corrective action, rather than letting it continue and come to light in the OIG's interim report. This breach needs to be remedied immediately, with systems and procedures put in place to ensure that the potential for conflicts of interest is eliminated.

Suspending, or pausing, LPO operations until this situation is rectified is reasonable. Using this as a reason to end the program, however, is not … and would rob the nation of the

benefits that these programs provide to workers, local communities, and U.S. global competitiveness and dominance.

5. **VIOLATION OF STATUTE:** Section 9010 of the Consolidated Appropriations Act of 2021, which was crafted by AFCC to revitalize and fix several problems that had hobbled the operation of the Title 17 and ATVM loan programs, stipulates that the fees charged to borrowers by the LPO are to be "collected on or after the financial close of an obligation."

   This stipulation makes specific reference to the "costs associated with third-party consultants engaged by the Secretary" to assist with application processing and due diligence. These fees amount to several million dollars per application.

   AFCC advocated for and succeeded in incorporating this deferral of fees in Section 9010 so that small businesses, startups, and pre-revenue companies would not be placed at a disadvantage and prevented from advancing emerging technologies and manufacturing processes, each of which holds the potential to greatly benefit to the nation, due to an inability to pay these fees prior to closing.

   The LPO, however, submitted a Federal Register Notice in May 2023, in violation of §9010(a)(3)(A), stating that, effective immediately, borrowers would be charged for the costs associated with third-party consultants engaged by the LPO prior to start of due diligence.

   The LPO's argument for this breach was that, while its loan authority was increased nearly tenfold by the IRA, the funds that were made available "for necessary administrative expenses" and "the costs of guarantees" were not increased at a commensurate level and were sufficient to keep pace with the inflow of applications that had been unleashed by Section 9010 and the IRA.

   The LPO, therefore, made the choice to accept more applications, favoring the companies that could pay at the expense of companies for whom the statutory language had been enacted and could not pay. **This needs to be corrected by ensuring that the LPO has sufficient funding in its annual appropriation for administrative expenses and the costs of guarantees.**

Impact on the Communities in Your State: These loan programs have provided a lifeline for projects operating in 90 locations in the U.S., which have created skilled high-paying jobs, increased consumer spending, generated revenues for local suppliers and businesses, stimulated economic growth, and enlarged local government tax revenues for public services and infrastructure. Current projects in the LPO pipeline will expand these benefits to other local communities throughout the nation, including those in your State.

Programmatic Funding Request #2

Title of Request: Advancing Innovations from Early-Stage Promise to the Threshold of Commercialization

Request Type: Funding Request

Appropriations Subcommittee: Energy and Water Development and Related Agencies

Department: U.S. Department of Energy

Agency: Office of Energy Efficiency and Renewable Energy (EERE)

Account: Energy Programs

Program, Project, Activity Title: Office of Energy Efficiency and Renewable Energy (EERE)

Priority: This is a very high priority since EERE administers multiple funding programs that are the second essential building block for advancing promising early-stage innovations and technologies, including innovations in transportation, fuels, renewable chemicals, advanced building materials and manufacturing technologies, and energy production.

1. Funding for **the first building block** comes from the Advanced Research Projects Agency – Energy (ARP-E), described in Programmatic Funding Request #3 below, which selects innovations which have the potential to be cutting edge or transformative, and moves them through the first Technology Readiness Levels, TRLs 1-3, from concept to the initiation of active research and development.
2. EERE's funding programs are **the second building bloc**k that moves innovations and emerging technologies through the next stages of development: TRL 4, the integration of basic components; TRL 5, the validation of operational integrity; and TRL 6, model, prototype, or pilot testing.
3. This is followed by TRL 7 demonstration scale testing and TRL 8 pre-commercial demonstration of an innovation's operational technology, concept, or approach, which are advanced through yet another one of DOE's essential building blocks, **building block #3**, the funding programs of the Office of Clean Energy Demonstration (OCED).
4. **The fourth building block**, TRL 9, the first commercial deployment, is provided by the Title 17 and ATVM loan programs.

Each of these building blocks are essential in advancing transformative energy components, power production and manufacturing systems, and new job-creating, local-economy-stimulating, local-tax-revenue-generating projects Take one of these essential building blocks away and it will be much more difficult … if not impossible … for these innovations improve the lives and economic wellbeing of the American public, local communities, and compete in the global market place.

Prior Year Funding Levels, Senate Appropriations Committee FY2025 Markup, & AFCC's 2026 Request:

FY 2022 Appropriation	FY 2023 Appropriation	FY 2024 Appropriation	FY 2025 Agency Request	FY 2025 Senate Markup	AFCC's FY 2026 Request
$3,200,000,000	$3,460,000,000	$3,460,000,000	$3,118,000,000	$3,440,000,000	**$3,200,000,000**

AFCC's #1 Priority within EERE is funding for the Bioenergy Technologies Office (BETO), which has received $280,000,000 from the EERE annual appropriation for each of the fiscal years above. AFCC's requests that this level of funding be continued. BETO provides direct funding to the DOE national labs for specific research and development projects, using their expertise to assist in advancing innovations through TRLs 4-6. A major focus of its programs is on **adding economic value to wastes** by converting agricultural, forestry, municipal, and other wastes from liabilities into assets b**y utilizing wastes to produce fuels, chemicals, consumer products, and energy.** BETO also supports algal systems research and a demonstration program to move promising innovations and technologies through the remaining TRL levels, in readiness for TRL 9 and their first commercial deployment.

Purpose & Justification for this Request: The terms "energy efficiency" and "renewable energy" are not in current favor. In fact, there are calls from some quarters to reverse decades-long federal policies in support of these industries.

Doing so would be a mistake. The Office of Energy Efficiency and Renewable Energy (EERE) provides one of DOE's four key building blocks for advancing energy innovations to advance through Technology Readiness Levels 4-6, without which cutting-edge and transformative innovations could not be proven and readied for commercial demonstration and deployment.

The importance of these programs is underscored by the advancements in energy efficiency and renewable energy over the past two decades, which have been creating jobs and growing local economies at an accelerating pace.

According to the International Energy Agency (see the attached ***"Data Supporting the Exceptional Economic & Job-Generating Impact of Renewable Energy"***):

- "Clean energy employs of 50% of total energy workers," not just in the U.S., but globally, "owing to the substantial growth of new projects coming online,"
- "The construction of new projects, including the manufacture of their components, is the largest driver of energy employment across the value chain."
- "Around 45% of energy workers today are in high-skilled occupations, compared to only one-quarter across the economy. This share is even higher for jobs in research and development for new energy innovations, many of which are set to grow rapidly to 2030."

EERE is a key propellant for this growth, which is done through its funding programs that accelerate the research, development, demonstration, and deployment of technologies and solutions to meet the nation's growing energy demands (which are projected to increase by 50% or more, per the March 17, 2025 New York Times article cited below) due to the expanding use of AI and the mushrooming need for data centers.

The transition to renewable energy is a dominating global market trend, as described above in AFCC's "Purpose and Justification" statement for the Title 17 and ATVM loan programs, **in which the U.S. can either strive to compete … or retreat … and cede the global market to China.**

Here are some additional trends that bear consideration:

As noted in a February 27,2023 New York Times article, "*As Oil Companies Stay Lean, Workers Move to Renewable Energy*":

- "In more than a dozen interviews, energy workers and executives said they had switched to renewable energy because they felt that the oil and gas industry's best days were behind it. **Others said they were no longer willing to tolerate the extreme ups and downs of oil and gas prices, and the accompanying cycle of rapid hiring followed by crushing layoffs."** [emphasis added]

Another New York Times article, on March 17, 2025, entitled "*Want Cheap Power, Fast? Solar and Wind Farms Have a Suggestion*," states:

- **"Wind, solar and battery storage are relatively quick and cheap to construct. That could help avert energy shortages and keep prices low, an argument that renewable energy firms are making to policymakers.** [emphasis added]

  "'Our message to the administration is, let's be realistic about this,' John Ketchum, the chief executive of NextEra Energy, one of the country's largest power producers, said in an interview. **'If you take renewables and storage off the table, we're going to force electricity prices to the moon.'"** [emphasis added]

- Mr. Ketchum goes on to say: "**power companies now have to wait up to five years to order new gas turbines** as manufacturers struggle to keep up with global demand. Any new gas projects that aren't already under development are unlikely to come online before 2030, he said. Other nascent technologies like advanced nuclear power are even farther off. [emphasis added]

  "'By contrast," he continues, "'many wind and solar projects can be built within 12 to 18 months,' adding **'the cost of building new gas power plants has also nearly tripled since the inflation shock of 2022 … while wind and solar prices have increased only modestly.'"** [emphasis added]

Forbes Magazine has published several articles over just the past two weeks (on March 13, 21, and 23) backed by multiple sources that are cited in the articles, emphasizing the costs that could result from turning away from the advancement of energy innovations and deployment of renewable energy systems. These include:

- **"The economic case for … action is clear, yet not broadly known and understood,"** [emphasis added]
- " Inaction could cost 1/3 of global GDP this century,"
- **"Data from the National Centers for Environmental Information (NCEI) shows that since 1980, the U.S. has suffered 403 weather-related disasters, each causing over billion dollars in damage. It is worth noting that before 1980, there were only three such billion-dollar events."** [emphasis added]
- In contrast, "Investment in both mitigation and adaptation [through energy innovations and renewable energy] could bring a return of around tenfold by 2100."
- **"What all this points to is that [weather extremes] provoke innovation, new infrastructure, technologies and markets** in the context of a world where security is now a priority …" [emphasis added]

The DOE programs that AFCC are included in its FY2026 E&W programmatic funding requests are <u>the four critical building blocks</u> that are necessary to respond to … and address … the issues raised above.

Impact on the Communities in Your State: EERE funds the innovations and technologies that will create jobs, economic growth, increased local tax revenues, and improved well-being and health in the years to come for constituents in your State.

Programmatic Funding Request #3

Title of Request: The Innovation Incubator & Accelerator

Request Type: Funding request

Appropriations Subcommittee: Energy and Water Development and Related Agencies

Department: U.S. Department of Energy

Agency: Advanced Research Projects Agency – Energy (ARPA-E)

Account: Energy Programs

Program, Project, Activity Title: Advanced Research Projects Agency – Energy (ARPA-E)

Priority: This also is a high priority since ARPA-E is the first essential building block in advancing transformative energy innovations.

Prior Year Funding Levels, Senate Appropriations Committee FY2025 Markup, & AFCC's 2026 Request:

FY 2022 Appropriation	FY 2023 Appropriation	FY 2024 Appropriation	FY 2025 Agency Request	FY 2025 Senate Markup	AFCC's FY 2026 Request
$450,000,000	$470,000,000	$470,000,000	$450,000,000	$450,000,000	$450,000,000

Purpose & Justification for this Request: The Advanced Research Projects Agency – Energy (ARPA-E) is the first of the essential building blocks for advancing innovations. It plays a significant role in incubating and accelerating highly promising initiatives by identifying and supporting revolutionary inventions and transformational advances in high-potential areas.

ARPA-E's focus is on nurturing the projects, economic drivers, and global dominating technologies of tomorrow.

It does this through dynamic technical programs, each of which addresses different parts of the energy technology space. It also accepts open solicitations on a periodic basis which seek to find and advance the most innovative new ideas in energy technology across the full spectrum of energy applications, thus allowing the agency to support the development of important technologies that fall outside the scope of its focused programs.

ARPA-E has demonstrated significant success in accelerating high-potential, novel technical approaches to existing and emerging U.S. energy challenges, as well as in accelerating the economic impact of U.S. investments in energy research and development and advancing the commercialization readiness of successful projects.

ARPA-E's Technology-to-Market Advisors and Program Directors work closely with its grantees to help identify pathways toward commercial deployment, using EERE grants and the Title 17 loan program to advance projects through each additional Technology Readiness Level (TRL) to reach commercial realization.

Impact on the Communities in Your State: The innovations and technologies that will create tomorrow's jobs, economic growth, increased local tax revenues, and improved well-being and health for the constituents in your State – which are likely being initiated right now by science fair high school students, visionary startups, and entrepreneurs working out of a spare bedroom or garage – are launched toward realization by ARPA-E.

Programmatic Funding Request #4

Title of Request: Demonstrating the Readiness of Innovations for Commercialization

Request Type: Funding Request

Appropriations Subcommittee: Energy and Water Development and Related Agencies

Department: U.S. Department of Energy

Agency: Office of Clean Energy Demonstration (OCED)

Account: Energy Programs

Program, Project, Activity Title: Office of Clean Energy Demonstrations (OCED)

Priority: This program also is a high priority, since it is the third essential building block in advancing innovations and proving their readiness for commercialization.

Prior Year Funding Levels, Senate Appropriations Committee FY2025 Markup, & AFCC's 2026 Request:

FY 2022 Appropriation	FY 2023 Appropriation	FY 2024 Appropriation	FY 2025 Agency Request	FY 2025 Senate Markup	AFCC's FY 2026 Request
Not active	$89,000,000	$89,000,000	$180,000,000	$27,500,000	**$100,000,000**

Purpose & Justification for this Request: OCED invests in demonstration projects that will catalyze private sector capital in the coming decade to achieve commercial liftoff across a range of technology areas and set the nation on a course to a modernized, advanced, and more resilient clean energy infrastructure.

Using over $25 billion in federal funding appropriated in the Infrastructure and Investment Jobs Act (IIJA), Inflation Reduction Act (IRA), and prior annual appropriations, OCED funds first-of-a-kind commercial-scale demonstrations that achieve sustained operations and deploy them at commercially viable scales to lay the foundation for an advanced energy economy.

Private industry has been eager to work with OCED on demonstration projects across a range of technologies according to in-depth DOE Liftoff Reports, consultations with financiers and industry, and as evidenced by almost all of OCED's IIJA and IRA provisions being oversubscribed.

One of the solicitations issued by OCED in early 2023 received over 800 applications, more than 12 times the number of awards that were available.

Impact on the Communities in Your State: OCED provides the final test, validation, and demonstration of readiness for commercial deployment of the innovations and emerging technologies that have progressed through each of the previous Technology Readiness Levels.

The pre-commercial demonstration stage, which integrates all inputs, components, operations, processes, and product outputs at a scale which typically is mid-way between pilot/prototype and commercial, greatly reduces the risk of failure as a technology/process/innovation is scaled up for its initial commercial deployment.

What may seem like an insignificant or hardly noticeable issue at the prototype, model, or pilot scale can (and has, many times) become a fatal flaw at commercial scale.

This is why private sector lenders and investors are wary of first-of-a-kind projects. They are more than happy to fund the 2^{nd}, 3^{rd}, and subsequent projects, once the first project has been proven.

Hence, it takes all four building blocks – ARPA-E, EERE, OCED, and the Title 17 and ATVM programs – to advance innovations and emerging technologies so they can create future jobs, economic growth, increased local tax revenues, and improved well-being and health in your State.