Advanced Research Projects Agency – Energy (\$K)

| FY 2024 | FY 2025 | FY 2026 | FY 2026 Request vs |
|---------|---------|---------|--------------------|
| Enacted | Enacted | Request | FY 2025 Enacted |
| 460,000 | 460,000 | 200,000 | |

Proposed Appropration Languange

For Department of Energy expenses necessary in carrying out the activities authorized by section 5012 of the America COMPETES Act (Public Law 110–69), \$200,000,000, to remain available until expended: *Provided*, That of such amount, \$40,000,000 shall be available until September 30, 2027, for program direction.

Mission

ARPA-E will identify and promote revolutionary advances in energy, translating scientific discoveries and cutting-edge inventions into technological innovations. It will focus on technologies promoting reliable, firm power that Americans can depend on. It will also accelerate transformational technological advances in areas where industry by itself is not likely to invest due to technical and financial uncertainty.

Overview

The U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) was established by the America COMPETES Act of 2007 (Public Law 110–69), as amended. ARPA-E will ensure that the U.S. maintains a technological lead in developing and deploying energy technologies. ARPA-E will identify and promote revolutionary advances in energy, translating scientific discoveries and cutting-edge inventions into technological innovations. It will also accelerate transformational technological advances in areas where industry by itself is not likely to invest due to technical and financial uncertainty. ARPA-E focuses on novel early-stage energy research and development (R&D) with technology applications that can be meaningfully advanced with a small investment over a defined period of time. ARPA-E coordinates its work with DOE's basic research and applied programs and other Federal research agencies to ensure work is not duplicated.

Projects that receive ARPA-E support are considered "high risk" and too early on in the development process for private sector support. They are subject to strict technical and commercialization milestones intended to ensure accountability and transparency that enable rapid reprioritization of Agency funds towards only the most promising technologies. This has resulted in significant commercial interest, investment, and follow-on funding for successful technologies, amplifying the impact of the Agency's funding decisions and accelerating progress towards achieving the Agency's mission.

In 2026, ARPA-E will continue to fund and direct the discovery of outlier energy technologies that ensure Americanmade energy for all. ARPA-E's research and development programs actively support the administration's goal of restoring U.S. energy dominance by increasing the energy available to power modern life and unleash American energy innovation to maintain America's global competitiveness.

Advanced Research Projects Agency - Energy (\$K)

| | FY 2024 | FY 2025 Enacted | FY 2026 Request | FY 2026 Request vs FY 2025 Enacted | |
|--|---------|--------------------|--------------------|---------------------------------------|------|
| | Enacted | Enacted | | \$ | % |
| ARPA-E Projects | 420,000 | 420,000 | 160,000 | -260,000 | -62% |
| Program Direction | 40,000 | 40,000 | 40,000 | - | -% |
| Total, Advanced Research Projects Agency - Energy | 460,000 | 460,000 | 200,000 | -260,000 | -57% |

SBIR/STTR (\$K):

- FY 2024 Enacted: SBIR: \$13,400; STTR \$1,890
- FY 2025 Enacted: SBIR: \$13,400; STTR \$1,890
- FY 2026 Request: SBIR: \$5,168; STTR: \$727

Overview

ARPA-E identifies and supports revolutionary inventions and transformational energy advances, which requires constant evolution of its programmatic focus. This is accomplished by establishing dynamic technical programs (each lasting about three years) designed to accelerate innovation in high-potential areas. The breadth of the program portfolio that has developed over ARPA-E's lifetime addresses different parts of the energy technology space from year to year.

ARPA-E has demonstrated the efficacy of its model for accelerating high-potential, novel technical approaches to existing and emerging U.S. energy challenges. Program Directors, recruited for their technical expertise, leadership, and experience in energy issues, are given significant autonomy in identifying potential high-impact areas for R&D investment. ARPA-E's Program Directors work to develop their proposals in the context of both private sector and federally funded work in the technical space, and ultimately propose focused programs designed to accelerate research and commercial development in the topic area.

As a complement to its focused technology programs, ARPA-E also supports OPEN solicitations. OPEN solicitations seek the most innovative new ideas in energy technology across the full spectrum of energy applications, allowing the Agency to support the development of important technologies that fall outside the scope of its focused programs. OPEN solicitations are released every three years and were run in 2009, 2012, 2015, 2018, 2021, and 2024.

One significant component of ARPA-E's mission is accelerating the economic impact of U.S. investments in energy R&D, and advancing the commercialization readiness of successful projects is essential to achieving this goal. As project teams demonstrate success, ARPA-E's Technology-to-Market Advisors and Program Directors work closely with the teams to help identify pathways toward commercial deployment. Many of ARPA-E's alumni projects have been able to obtain follow-on funding from private investors, state agencies, and/or federal programs, and ARPA-E's maturing portfolio is offering increasing opportunities for commercialization of ARPA-E funded technologies.

Despite the level of technology 'de-risking' that projects from focused and OPEN solicitations have achieved, ARPA-E determined that further de-risking is necessary in some areas to validate technologies at a scale pertinent to investment. To this end, ARPA-E released SCALEUP solicitations in 2019, 2021, 2023, and 2024. SCALEUP is designed to fund successful technologies that were previously funded by ARPA-E for which the proof-of-concept R&D challenges have been addressed. Success in scaling these projects would enable industry, investors, and partners to justify substantial commitments of financial resources, personnel, production facilities, and materials to develop promising ARPA-E technologies into early commercial products. ARPA-E released an evergreen SCALEUP solicitation in FY 2024 to continue the push toward commercialization for previous early-stage ARPA-E funded projects.

Highlights of the FY 2026 Budget Request

In FY 2026, ARPA-E plans to release up to 4 new focused solicitations. FY 2026 Focused solicitations will:

- Continue to fund and direct the discovery of outlier energy technologies that ensure the production of reliable, American-made energy.
- Support the Administration's goal of restoring U.S. energy dominance through firm, baseload power.
- Further the Secretary's commitments to advance energy addition by increasing the energy available to power modern life and unleash American energy innovation to maintain America's global competitiveness

ARPA-E will also continue its stand-alone SBIR/STTR program to provide additional support to small businesses beyond the significant number of awards to small businesses via ARPA-E's standard non-SBIR/STTR solicitations.

ARPA-E Projects Funding (\$K)

| | FY 2024 Enacted | FY 2025 Enacted | FY 2026 | FY 2026 Re FY 2025 E | • |
|------------------------|--------------------|--------------------|-----------|-------------------------|------|
| | Enacted | Enacteu | Request - | \$ | % |
| ARPA-E Projects | 420,000 | 420,000 | 160,000 | -260,000 | -62% |
| Total, ARPA-E Projects | 420,000 | 420,000 | 160,000 | -260,000 | -62% |

Explanation of Change for ARPA-E Projects

The Budget reduces funding for ARPA-E to a fiscally responsible level for high risk, high reward research advancing reliable energy technologies and other critical and emerging technologies that produce reliable, domestic power.

Overview

Program Direction enables ARPA-E to maintain and support a world-class Federal workforce that supports its mission. Funding provides resources for program and project management, oversight activities, workforce management, IT support, and Headquarters facilities and infrastructure. Funding also supports ARPA-E summer scholars, which is a cohort of graduate students to support ARPA-E's efforts to develop new programs and commercialization pathways for ARPA-E funded technologies.

| | r analig (4 | | | | |
|--|-----------------|---------|---------|---------------------------------------|------|
| | FY 2024 FY 2025 | | FY 2026 | FY 2026 Request vs FY 2025 Enacted | |
| | Enacted | Enacted | Request | \$ | % |
| Program Direction | | | | 1 | |
| Salaries and Benefits | 14,850 | 14,850 | 12,860 | -1,990 | -13% |
| Travel | 1,450 | 1,450 | 2,000 | +550 | +38% |
| Support Services | 17,100 | 17,100 | 17,100 | - | -% |
| Other Related Expenses | 6,600 | 6,600 | 8,040 | +1,440 | +22% |
| Total, Program Direction | 40,000 | 40,000 | 40,000 | 0 | 0% |
| Federal FTEs | 58 | 54 | 45 | -9 | -17% |
| Additional ARPA-E FTEs via IPAs ¹ | 13 | 13 | 13 | - | -% |
| Total FTEs | 71 | 67 | 58 | -9 | -13% |
| Support Services | | | | | |
| Technical Support | 5,985 | 5,985 | 5,985 | - | -% |
| Management Support | 11,115 | 11,115 | 11,115 | - | -% |
| Total, Support Services | 17,100 | 17,100 | 17,100 | - | -% |
| Other Related Expenses | | | | | |
| Working Capital Fund | 4,123 | 4,123 | 4,800 | +677 | +16% |
| Energy Information Technology Services (EITS) | 1,588 | 1,588 | 2,190 | +602 | +38% |
| Other Services | 889 | 889 | 1,050 | +161 | +18% |
| Total, Other Related Expenses | 6,600 | 6,600 | 8,040 | +1,440 | +22% |

Program Direction Funding (\$K)

¹ Select ARPA-E Program Directors are hired and funded via Intergovernmental Personnel Act Agreements

Program Direction Activities and Explanation of Changes (\$K)

| FY 2025 Enacted | FY 2026 Request | Explanation of Changes FY 2026 Request vs FY 2025 Enacted |
|------------------------------------|---------------------------------------|--|
| Program Direction | Request | 11 2020 Request V311 2023 Enacted |
| \$40,000 | \$40,000 | \$- |
| Salaries and Benefits | | |
| \$14,850 | \$12,860 | - \$1,990 |
| At the FY 2025 Enacted level, | At the FY 2026 Request Level, | ARPA-E reflects a reduction in the |
| ARPA-E supported 67 Federal | ARPA-E anticipates needing up to | workforce to support the Department's |
| FTEs, inclusive of staff funded | 58 Federal FTEs, inclusive of staff | reorganization efforts and the |
| through Intergovernmental | funded through Intergovernmental | Administration's goals and priorities. |
| Personnel Act Agreements. | Personnel Act Agreements. | |
| Travel | | |
| \$1,450 | \$2,000 | + \$550 |
| At the FY 2025 Enacted level, | At the FY 2026 Request level, | Travel will be based on staffing and number |
| ARPA-E Program Directors and | ARPA-E Program Directors and | of active projects. |
| Technology-to-Market advisers | Technology-to-Market advisers will | |
| will visit performers regularly as | increase visits to performers as part | |
| part of ARPA-E's hands-on | of ARPA-E's hands-on engagement. | |
| engagement. The number of site | The number of site visits will | |
| visits will be commensurate with | increase with the number of | |
| the number of ongoing projects. | ongoing projects. | |
| Support Services | | |
| \$17,100 | \$17,100 | \$- |
| At the FY 2025 Enacted level, | At the FY 2026 Request level, | No change. |
| ARPA-E anticipates continuing | ARPA-E anticipates the continuing | - |
| the use of support service | use of support service contractors | |
| contractors to support ARPA-E | to support ARPA-E federal staff in | |
| federal staff in the management | the management and oversight of | |
| and oversight of projects and | projects and other required | |
| other required functions. | functions. The level of support is | |
| | commensurate with the number of | |
| | active and anticipated projects. | |
| Other Related Expenses | | |
| \$6,600 | \$8,040 | + \$1,440 |
| The FY 2025 Enacted level for | The FY 2026 Request level for other | Anticipated increase in WCF and EITS |
| other related expenses primarily | related expenses primarily consists | costs, even with reductions in levels of |
| consists of Working Capital Fund | of Working Capital Fund and Energy | staffing. |
| and Energy Information | Information Technology Services | |
| Technology Services (EITS) | (EITS) support costs. | |
| support costs. | | |

Research and Development Funding (\$K)

| | FY 2024 Enacted | FY 2025 Enacted | FY 2026 Request | FY 2026 Request vs FY 2025 Enacted |
|---------------|--------------------|--------------------|--------------------|---------------------------------------|
| Basic | - | - | - | - |
| Applied | 230,000 | 345,000 | 150,000 | -195,000 |
| Development | 230,000 | 115,000 | 50,000 | -65,000 |
| Subtotal, R&D | 460,000 | 460,000 | 200,000 | -260,000 |
| Equipment | - | - | - | - |
| Construction | - | - | - | - |
| Total, R&D | 460,000 | 460,000 | 200,000 | -260,000 |