Federal Energy Management Program

Proposed Appropriation Language

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for federal energy management activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, \$169,661,000, to remain available until expended: Provided, That of such amount, \$14,511,000 shall be available until September 30, 2024, for program direction. P.L. 95-91, "Department of Energy Organization Act" (1977)

P.L. 109-58, "Energy Policy Act of 2005"
P.L. 110-140, "Energy Independence and Security Act of 2007"
P.L. 115-246, "Department of Energy Research and Innovation Act" (2018)
Energy Act of 2020, Section 1012 (42 U.S.C. 8253(i))

Explanation of Changes

The newly created Federal Energy Management Program (FEMP), within the Office of the Under Secretary for Infrastructure, helps Federal agencies meet sustainability goals by providing technical assistance, financial assistance, training, and other resources. FEMP works with stakeholders to enable Federal agencies to identify affordable solutions, facilitate public-private partnerships, and provide energy leadership to the country through government best practices. FEMP was previously funded within the Office of Energy Efficiency and Renewable Energy (EERE).

Federal Energy Management Program

Overview

The Federal Energy Management Program (FEMP) within the Office of the Under Secretary for Infrastructure helps federal agencies meet federal sustainability goals by accelerating the implementation of energy and water conservation measures, implementing deep retrofits, improving energy resilience, and transitioning to zero-emission fleets. The program provides technical assistance and financial assistance to agencies and works with its stakeholders to enable federal agencies to identify affordable solutions, facilitate public-private partnerships, and provide energy leadership to the country by identifying and leveraging government best practices. These activities were previously funded within the Office of Energy Efficiency and Renewable Energy (EERE). The FY 2023 Budget requests \$170 million for FEMP, including \$60 million for the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) Grant Program under the Federal Energy Efficiency Fund (FEEF) authority and \$57.5 million to launch the Net Zero Labs Initiative.

The Federal Government is the single largest U.S. energy consumer with more than 360,000 buildings and structures comprising 3 billion square feet and 600,000 fleet vehicles. FEMP, in accordance with the Energy Act of 2020, Section 1012 (42 U.S.C. 8253(i)), is tasked to facilitate the implementation by the Federal Government of cost-effective energy and water management and energy-related investment practices; (A) to coordinate and strengthen Federal energy and water efficiency and resilience; and (B) to promote environmental stewardship.

The federal government has successfully reduced its energy use and carbon footprint since 2008. In FY 2020, the Federal Government used 1.2 quads of primary energy at a cost of \$16.4 billion, which represents a reduction in consumption of 21.8 percent since 2008. ¹ Energy used in buildings and facilities represents about 59 percent of the total energy use of the Federal Government, and vehicle and equipment energy use accounts for 41 percent.² In FY 2020, the emissions from onsite building fuels, electricity use, and vehicle fuels (grouped as scope 1 and 2 emissions) from standard and non-standard Federal operations³ totaled 68.6 million metric tons of carbon dioxide equivalent (MTCO2e), which represents a 33.8 percent reduction in emissions.⁴

However, there is a significant opportunity and responsibility for the Federal Government to make further improvements: agencies estimated and reported just over \$7 billion⁵ of potential cost-effective efficiency investments that would result in energy and water savings. Federal agencies have a tremendous opportunity and responsibility to lead by example, both in sharing practices and approaches that state, local and private sector actors can adopt and by demonstrating and deploying technologies at scale to drive market transformation.

FEMP's activities are responsive to Administration priorities, statutory requirements, and Federal agency needs. Federal agencies are required to comply with Executive Order and statutory mandates while maintaining resilient, efficient, and secure installations for mission assurance. Federal agencies' needs include technology development and integration; infrastructure improvements; energy project development and implementation assistance; and workforce development.

FEMP works with its stakeholders to build federal agencies' capacity to meet those goals by supplying agencies with the information, tools, and assistance they need to meet and track their energy- and sustainability related requirements and goals. In addition, FEMP provides financial assistance to agencies through the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) Grant Program under its Federal Energy Efficiency Fund (FEEF) Program authority.

¹ Table A-4 and Table A-2 <u>http://ctsedwweb.ee.doe.gov/Annual/Report/Report.aspx</u>.

² In terms of primary (source) energy use.

³ Standard operations include the operation of Federal buildings and fleet vehicles while non-standard operations are primarily military and law enforcement operations.

⁴ Table E-2 <u>https://ctsedwweb.ee.doe.gov/Annual/Report/Report.aspx</u>

⁵ \$7.2 billion identified by agencies in their evaluations of facilities comprising 75 percent of Federal facility square footage;

 $https://ctsedwweb.ee.doe.gov/CTSDataAnalysis/Default.aspx?ReturnUrl = \%2fCTSDataAnalysis\%2fReports\%2fPublicAgencyReport_ComprehensiveEvaluationFindings.aspx$

Highlights of the FY 2023 Request

The FY 2023 Request reflects the realignment within DOE. The Federal Energy Management Program (FEMP) control point, currently in the Energy Efficiency and Renewable Energy (EERE) appropriation account, functionally transfers to the new Federal Energy Management Program (FEMP) appropriation account organizationally within the Office of the Under Secretary for Infrastructure.

In FY 2023, FEMP will continue to leverage the FEEF Program/AFFECT grants providing competitive funding to Federal agencies to invest in energy and water infrastructure improvements, including decarbonization, electrification and resilience of federal operations. At the same time, FEMP will implement its federal building decarbonization strategy through coordinated agency engagements to develop replicable solution sets. FEMP will encourage agencies to leverage performance contracting in the form of an Energy Savings Performance Contracts (ESPC), ESPC ENABLE contracts, and Utility Energy Service Contracts (UESC) to implement energy conservation measures at federal facilities

In FY 2023, the program will launch the Net-Zero Labs Initiative competitively selecting clean energy and decarbonization projects across the National Laboratory complex. The Net Zero Lab initiative will play a critical role in using the lab's extensive research and analytical capabilities to develop and deploy critical climate and clean energy solutions, becoming an early adopter of key technologies, and serving as an exemplar for large institutions seeking to reduce their total carbon emissions and equivalent energy and water usage.

Contributions to DOE-wide Crosscutting Investments

FEMP is involved in several crosscuts, including the following:

- Energy Storage (\$1,000,000)—FEMP will provide technical assistance to Federal agencies to integrate energy storage technologies into their decarbonization and climate adaption strategies. Additional funding may be associated with energy storage AFFECT grant awards.
- Historically Black Colleges and Universities (HBCUs) (\$250,000)—FEMP will continue to coordinate with EERE for their inclusive innovation prize to increase opportunities for innovation and entrepreneurial activities within Federal government energy management. In addition, FEMP will incorporate equity, energy, and environmental justice considerations into AFFECT grant award criteria.
- Science, Technology, Engineering, and Mathematics (STEM) activities (\$500,000)—FEMP actively participates in fellowship programs to increase agility and skills related to energy and water management in the Federal government. FEMP will partner with Federal agencies to implement a Climate Professionals Internship Program.

Federal Energy Management Program (\$K)

	FY 2021 Enacted	FY 2022 Annualized CR ¹	FY 2023 Request	FY 2023 Request vs FY 2021 Enacted
Federal Energy Management Program				
Federal Energy Management	27,000	27,000	38,150	+11,150
Federal Energy Efficiency Fund	13,000	13,000	60,000	+47,000
Net-Zero Laboratory (NZL) Initiative	0	0	57,000	+57,000
Program Direction ²	13,635	13,635	14,511	+876
Total, Federal Energy Management Program	53,635	53 <i>,</i> 635	169,661	+116,026

Future Years Energy Program

	FY 2023 Request	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate
Federal Energy Management Program					
Federal Energy Management Program	169,661	174,000	178,000	182,000	186,000
Total, Federal Energy Management Program	169,661	174,000	178,000	182,000	186,000

Outyear Priorities and Assumptions

In the FY 2012 Consolidated Appropriations Act (P.L. 112-74), Congress directed the Department to include a future-years energy program (FYEP) in subsequent requests that reflects the proposed appropriations for five years. This FYEP shows outyear funding for each account for FY 2024 - FY 2027. The outyear funding levels use the growth rates from, and match the outyear account totals published in, the FY 2023 President's Budget for both the 050 and non-050 accounts.

FEMP priorities in the outyears include the following:

- Provide technical assistance to support implementation of statutory and regulatory building and fleet electrification and decarbonization goals.
- Support federal facilities in advancing energy efficiency, clean energy, and operational resilience across the federal building stock and fleets, optimize energy and water management systems.

¹ The FY 2022 Annualized CR amounts reflect the continuing resolution level annualized to a full year. PD was prorated based on the EERE Program Direction line, so the funding is non-comparable. ² PD Request for FY23 includes \$500K to support NZL, \$300K for National Environmental Policy Act (NEPA), and \$76K for pay raise assumption.

- Develop and implement performance contracting strategies to support technology and equipment purchases, deep energy and water retrofits, and life-cycle cost buy-downs and/or bundling within performance contracts.
- Support large-scale federal fleet electrification and building decarbonization by facilitating the deployment of renewable resources and energy storage at federal facilities.

Federal Energy Management Program

Description

As part of the Department of Energy's (DOE) Under Secretary for Infrastructure, the Federal Energy Management Program's (FEMP) priority is to facilitate strategic energy management across the Federal Government. FEMP's efforts enable Federal agencies to meet energy-related goals, comply with statutory and Executive Order requirements, and provide energy leadership to the country by addressing climate change, increasing fleet electrification, and reducing greenhouse gas emissions (GHG) from the federal footprint.

FEMP is authorized per Sec. 1012 of the Energy Act 2020 (EA 2020) to facilitate the implementation by the Federal Government of cost-effective energy and water management and energy-related investment practices to coordinate and strengthen Federal energy and water resilience and promote stewardship. FEMP supports the Executive Office of the President–Council on Environmental Quality and the Office of Management and Budget in the development of Federally focused policy, implementation guidance, agency performance targets, and tracking agency performance.

FEMP activities address Federal agency needs for spurring technology innovation and integration; leveraging performance contracting for infrastructure improvements; developing a skilled workforce; and fulfilling statutory requirements. FEMP strengthens agencies' ability and agility to strategically manage their energy and water infrastructure, while meeting critical mission objectives, through technical assistance focused on federal building decarbonization, climate adaptation for mission assurance, federal fleet electrification, and workforce development. FEMP seeks feedback from agencies, through the Interagency Energy Management Task Force, to inform prioritized activities.

Federal Energy Management:

In FY 2023, FEMP is requesting \$38.2 million for Federal Energy Management activities, including: Technical Assistance, Reporting and Statutory Requirements, and Workforce Development.

<u>Technical Assistance</u>: FEMP utilizes DOE's National Laboratory subject matter experts to support the development of tools and resources needed to advance carbon free electricity procurement, performance contracting, federal building decarbonization, and the transition to a zero emission vehicle federal fleet. These efforts support implementation of federal sustainability projects and strategies, resulting in viable, replicable, energy and water projects. FEMP sharestechnical solution sets and resources that enable agencies to meet their statutory, regulatory, and executive order requirements. Specifically, in FY 2023:

FEMP will provide technical assistance to enhance development and execution of:

- <u>Carbon Free Electricity</u>: Per Executive Order 14057: *Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability,* it is the policy of the United States that the Federal Government achieve a carbon pollution-free electricity sector by 2035 and net-zero emissions economy-wide by no later than 2050. In addition, FEMP will enhance the REopt tool to support Federal agency site assessments of the techno-economic viability of distributed energy resource (DER) opportunities, including solar, wind, water, biomass, combined heat and power, geothermal, and electrical and thermal storage in support of federal building decarbonization objectives.
- <u>Performance Contracting</u>: FEMP will assist Federal agencies in implementing energy savings performance contracts (ESPCs), utility energy service contracts (UESCs), and other project financing options in pursuit of energy and water efficiency improvements, distributed energy projects, and demand response strategies. In conjunction with its AFFECT grant program design exploration and stakeholder engagement, FEMP will be prioritizing assisting agencies with statutory compliance with ESPC implementation requirements set by EA 2020 and advancing the inclusion of electrification and decarbonization measures within performance contracting. Specifically, FEMP will provide training and technical resources, such as Energy Service Company (ESCO) Selector and eProject Builder, project support regarding implementation ESPCs und UESCs to implement energy efficiency and DER deployment in support of energy management and decarbonization strategies.

- <u>Federal Buildings</u>: FEMP will provide technical assistance to federal agencies for their portfolio of buildings, campuses, and installations to achieve net-zero emissions by 2045 and reduce greenhouse gas emissions by 50 percent from buildings, campuses, and installations by 2032 from 2008 levels. <u>Specifically</u>, FEMP will support Federal agencies in areas such as, Decarbonization Technology Evaluation and Validation, Zero Energy Installations, Federal Smart Buildings, and Waste-to-Energy Conversion.
- <u>Federal Fleet</u>: FEMP will provide technical assistance to Federal agencies around fleet optimization to identify EV conversion pathways and implement model business case methodologies in support of fleet electrification strategies. Specifically, FEMP will provide technical assistance to support the widespread adoption of the Zero Emission Vehicle Planning and Charging (ZPAC) planning tool developed in FY 2022, which identifies EV opportunities and prioritizes EV installations. In addition, FEMP will develop resources to integrate EV charging infrastructure into building decarbonization strategies. In FY 2023, FEMP will deploy pilots of EV-to-building and EV-to-grid interaction to optimize building decarbonization opportunities as well as identify revenue streams to sites for demand response management and grid system support.

<u>Reporting and Statutory Requirements</u>: In FY 2023, FEMP is requesting \$4.15 million to support statutory and EO reporting requirements. DOE is statutorily required to carry out specific functions related to tracking and implementing effective energy and water management throughout the Federal Government. FY 2023 efforts will continue to focus on tracking statutory, regulatory, and EO requirements. FEMP will implement enhanced reporting system capabilities to achieve these requirements as well as deploy system upgrades to support decarbonization tracking.

FEMP develops annual reports for the Office of Management and Budget and Congress. These analytical reports track Federal progress towards goals on energy efficiency (42 U.S.C. § 8258(a), renewable energy use (42 U.S.C. § 15852(d)), and vehicles (42 U.S.C. § 6374e(a)). In addition, FEMP issues guidance and tracks compliance with the Energy Act of 2020 and the requirements of Section 432 of the Energy Independence and Security Act of 2007 (EISA), Management of Energy and Water Efficiency in Federal Buildings, including the completion of comprehensive evaluations of designated covered facilities and reporting potential and initiated efficiency measures, and annually benchmarking metered buildings.

<u>Workforce Development</u>: In FY 2023, FEMP is requesting \$2.3 million to improve the capabilities and skills of the Federal energy and water management workforce through training aligned with agency core competency needs and Federal Building Personnel Training Act (FBPTA) of 2010 requirements. FEMP will provide internationally accredited training courses for energy and water management professionals through a coordinated training program that includes on-demand and in person (currently virtual) training sessions, including the annual Energy Exchange training event. In addition, FEMP will assess opportunities to leverage the EERE Education Material for Professional Organizations Working on Efficiency and Renewable Energy Developments (EMPOWERED) workforce FOA to develop training content for the Federal energy and water management communities.

Federal Energy Efficiency Fund (FEEF):

AFFECT grants are authorized under Section 152 (f) of the Energy Policy Act of 1992 (EPAct 1992), Public Law 102-486, as codified in 42 U.S.C. § 8256 (b). This statute authorized FEEF to provide competitive grants to Federal agencies to help meet requirements of the National Energy Conservation Policy Act (NECPA), 42 U.S.C. § 8253(a)-(b). AFFECT grants have been provided most years since 2014.

In FY 2023, FEMP is requesting \$60 million in Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant funding for Federal agencies to drive decarbonization of the federal building stock, enable fleet electrification, and optimize energy and water management systems. AFFECT grants will be used to develop energy and water conservation measures and deep energy retrofits across the federal government, prioritizing high-impact projects that reduce GHG emissions and advance market transformation. These projects may include technology and equipment purchases for decarbonization and electrification technologies, life-cycle cost buy-downs and/or bundling with performance contracts.

AFFECT recipients must demonstrate why the grant is needed to implement the project or why the grant is needed to include specific energy conservation measures that would not be possible otherwise. Recipients are encouraged to identify small businesses, especially Minority, Woman, Veteran-Owned, or Disadvantaged Business Enterprise for participation and/or to solicit as vendors and sub-contractors in support of building an inclusive clean energy economy. Historically, AFFECT funds have resulted in a public to private gross investment ratio of 1:30.

Net Zero Lab Initiative

In FY 2023, FEMP will launch the Net-Zero Labs Initiative (NZL), with the goal of competitively selecting decarbonization projects across the National Laboratories. DOE Labs are energy-intensive research facilities with substantial 24/7 energy demands. DOE labs face challenges in all the major sectors of emissions: facilities, industry, transportation, and even agriculture. The NZL initiative will demonstrate major advancements in all sectors, and use technology innovations and partnerships, increased efficiencies, and novel approaches to demonstrate the path forward for establishing a clean energy economy. Several labs, including the National Energy Technology Lab, Idaho National Laboratory, National Renewable Energy Laboratory, and Pacific Northwest National Laboratory have already initiated in-depth analyses of how to transition to net-zero emissions while leveraging resident expertise and innovations progressing through their research and development portfolios.

Federal Energy Management Program Activities and Explanation of Changes

^PProgram Direction is described in a later section of this document. FY 2021 PD funding was part of the EERE appropriation account in FY 2021 and is non-comparable Under Secretary for Infrastructure/ Federal Energy Management Program
FY 2023

FY 2021 Enacted	FY 2023 Request	Explanation of Changes FY 2023 Request vs FY 2021 Enacted
 Reporting & Statutory Requirements (\$4.9M) Provided statutorily required reporting and technical guidance. Completed reporting requirements for Agency-level energy intensity, EISA 432 CTS Support, GHG Annual Reporting, FEMP Project Tracking System (PTS), FAST Fleet Reporting, and Energy Act 2020 requirements Coordinated with Council on Environmental Quality (CEQ) and Office of Management & Budget (OMB) on Executive Order implementation 	 Reporting & Statutory Requirements (\$4.2M) Implement enhanced reporting system capabilities to achieve statutory, regulatory, and EO requirements as well as deploy system upgrades and analysis to support decarbonization tracking. Develop training and resources to assist agencies in implementing facility design rules. 	 Decreased funding needed due to increased efficiency from implementation of reporting capabilities and prior year increases in training and resources for agency implementation of rules.
 Workforce Development(\$1.7M) Provided training content through free internationally accredited training program for energy and water management professionals via on-demand and in person (virtual) training sessions, including the annual Energy Exchange training workshop. 	 Workforce Development (\$2.3M) The Request initiates support for the EMPOWERED Workforce Funding Opportunity. Funding will support centralizing the development of educational modules relevant to clean energy technologies and their integration into existing career training and education pathways. FEMP will coordinate and direct funding toward overlapping skillsets and educational topics that support the deployment of relevant clean energy technologies. 	 Increase funding to support this new effort. FY 2023 is the first year of funding for this activity.
Federal Energy Efficiency Fund \$13,000,000	\$60,000,000	+\$47,000,000
• Awarded \$13 million in funding under the Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) grant program to catalyze the adoption renewable energy and efficiency strategies in areas with carbon-intensive utilities, and electrification at sites served by utilities with low-carbon fuel mix through privately financed performance contract projects.	• Award up to \$60 million in funding under the AFFECT grant program to drive decarbonization of the federal building stock and fleet electrification, optimize energy and water management systems, and fund technology and equipment purchases for established decarbonization and electrification technologies.	 Increased funding to expand number of awards and progress towards building decarbonization and fleet electrification targets.

FY 2021 Enacted	FY 2023 RequestExplanation of ChangesFY 2023 Request vs FY 2021 Enacted	
Net Zero Lab Initiative \$0	\$57,000,000	+\$57,000,000
No request	 NEW: Competitively select decarbonization projects across the National Laboratories 	• FY 2023 is the first year of funding for this activity.

Program Direction

Overview

Program Direction provides for the costs associated with the Federal workforce, including salaries, benefits, travel, support services, and other related expenses.

Salaries and Benefits support Federal employees who provide executive management, programmatic oversight, and analysis for the effective implementation of FEMP authorities.

Travel includes transportation, subsistence, and incidental expenses that allow FEMP to effectively provide technical assistance and outreach to regions, states, and tribes regarding planning needs and issues, policies, siting protocols, and new energy facilities.

Support Services includes contractor support directed by the Federal staff to perform administrative tasks and provide analyses to inform management decisions.

Other Related Expenses includes corporate IT support (for DOE's Energy Information Technology Services [EITS] desktop services and IT equipment) and working capital fund (WCF) expenses, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes office safety requirements, equipment upgrades and replacements, commercial credit card purchases using simplified acquisition procedures where possible, security clearance expenses, and other needs.

Highlights of the FY 2023 Budget Request

The FY 2023 Program Direction Request reflects a new proposed Control Point within FEMP for increased staffing to support the new and expanded program activities requested in FY 2023.

Program Direction Activities and Explanation of Changes

FY 2021 Enacted	FY 2023 Request Level	Explanation of Changes FY 2023 Request Level vs. FY 2021 Enacted	
Program Direction N/A-funding is non-comparable	\$14,511,000		
 Salaries and Benefits PD was prorated based on the EERE Program Direction line, so the funding is non-comparable. 	 \$8,300,000 - Salaries and Benefits support 45 FTEs that provide executive management, programmatic oversight, and analysis for the effective implementation of the program. Funding also provides support for S3 operations. 	• New request in FY 2023.	
 Travel & Training PD was prorated based on the EERE Program Direction line, so the funding is non-comparable 	 \$168,000 - Travel includes transportation, subsistence, and incidental expenses to effectively facilitate its mission 	• New request in FY 2023.	
 Support Services PD was prorated based on the EERE Program Direction line, so the funding is non-comparable 	 \$2,543,000 - Support Services includes contractor support directed by the Federal staff to performadministrative tasks and provide analysis to management. Support Services may include support for post-doctoral fellows 	• New request in FY 2023.	
 Other Related Expenses PD was prorated based on the EERE Program Direction line, so the funding is non-comparable 	 \$3,500,000 - Other Related Expenses includes EITS desktop services and WCF expense, such as rent, supplies, copying, graphics, mail, printing, and telephones. It also includes equipment upgrades and replacements, commercial credit card purchases using the simplified acquisition procedures to the maximum extent possible, security clearance expenses and other needs. \$500k is provided for 2 FTEs to support the NZL Initiative in addition to the 45 FTEs and \$300k is requested for NEPA compliance activities. 	• New request in FY 2023	

Bipartisan Infrastructure Law (BIL) Investments

EERE was appropriated funds through the Bipartisan Infrastructure Law (BIL) (P.L. 117-58), which includes activities realigned to the new Office of Federal Energy Management Program (FEMP). In FY 2022, approximately \$250 million of activities related to assisting federal facilities with energy conservation grant program will be managed by the new FEMP office. In FY 2023, no further funding is provided to continue implementing these activities. Please refer to EERE's Overview section for additional information on these BIL activities.

(71)	(\$	K)
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	FY 2022 BIL Appropriation	FY 2023 BIL Appropriation	Managing Organization
Energy Efficiency and Renewable Energy			
FEMP - Assisting Federal Facilities with Energy Conservation Grant	250,000	0	FEMP
Program			
Total, Energy Efficiency and Renewable Energy	250,000	0	